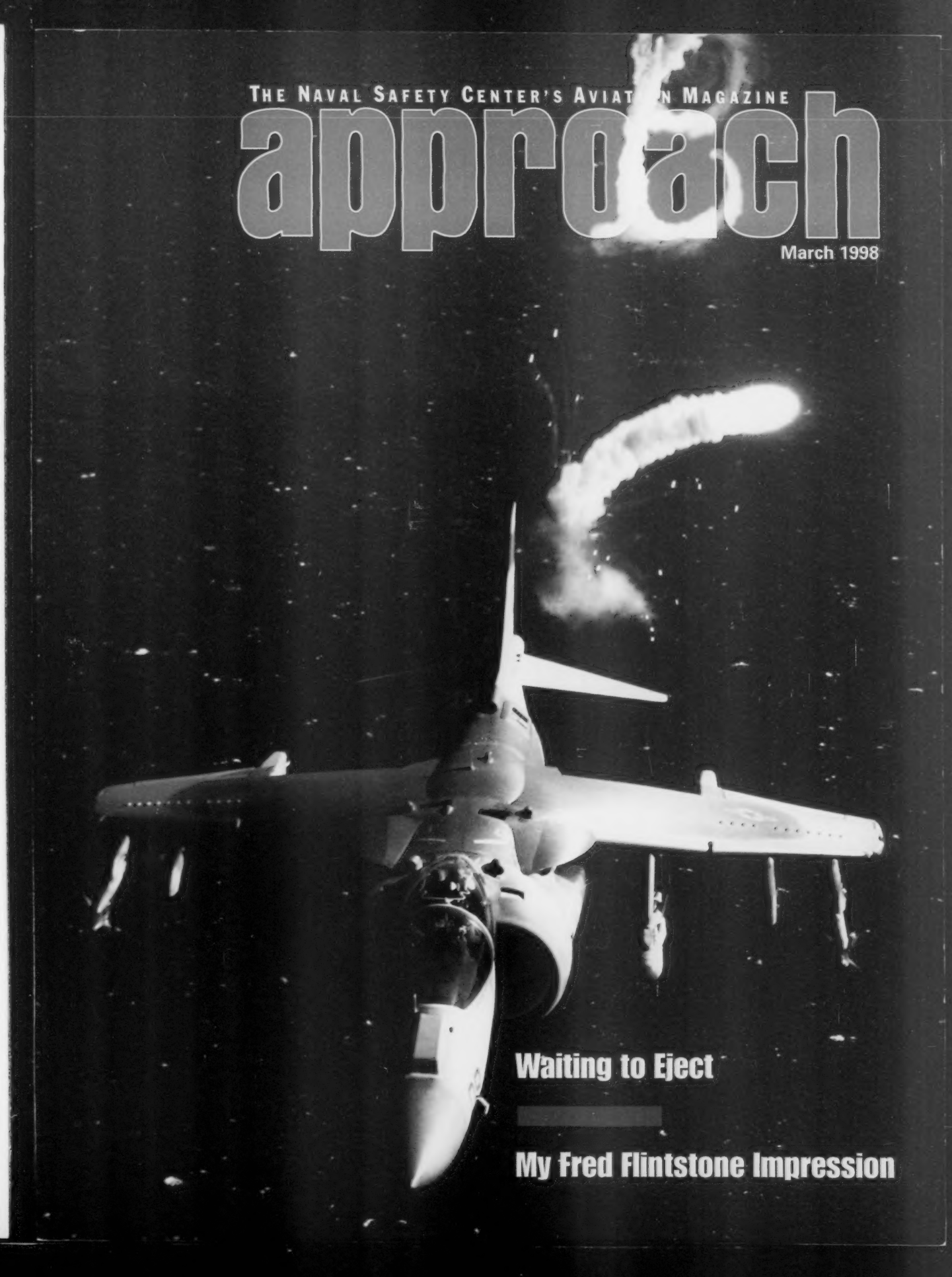
THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

approach

March 1998



Waiting to Eject

My Fred Flintstone Impression

THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

approach

Volume 43, Number 3 March 1998

On the cover: The pilot of a Harrier II Plus of VMA-542 fires flares.
Photo by Rick Llinares

RAdm. R.E. Besal, Commander, Naval Safety Center
Bill Mooberry, Executive Director
LCdr. Mark Enderson, Head, Media and Education Support
Derek Nelson, Editor-in-Chief

Approach Staff
Peter Mersky, Editor
Laurinda Minke, Design and Layout

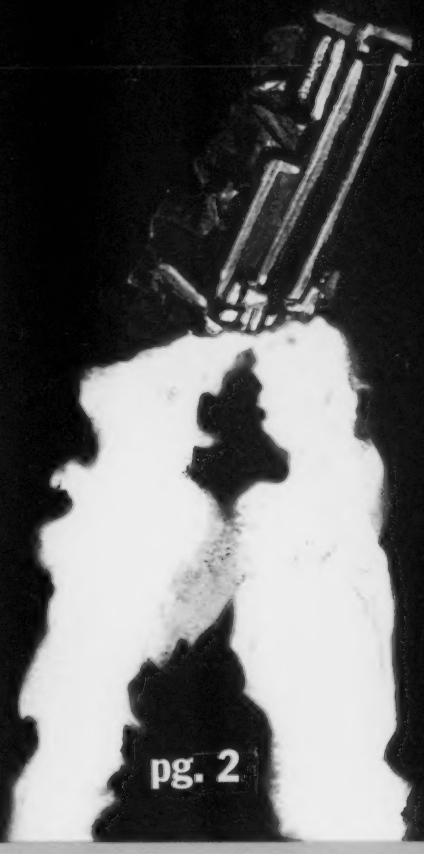
Address comments and contributions to:
Commander, Naval Safety Center
Attn: *Approach*, Code 71
375 A St., Norfolk, VA 23511-4399
(757) 444-3520 Ext. 7245
e-mail: menderso@safecen.navy.mil

For questions about distribution, contact Ginger Rives
e-mail: vrives@safecen.navy.mil

Homepage address: www.norfolk.navy.mil/safecen
NAVSAFECEN BBS (757) 444-7927/5857/5092
DSN 564

Approach (ISSN 0570-4979) is published monthly by the Commander, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399. *Approach* contents should not be considered directive and may not be construed as incriminating under Article 31 of the Uniform Code of Military Justice. Views expressed in guest-written articles are not necessarily those of the Naval Safety Center. *Approach* is available for sale by the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Subscription price: $33 per year. Telephone credit card orders can be made 8 a.m. to 4 p.m. Eastern time at (202) 512-1800. Periodicals postage paid at Norfolk, VA and additional mailing offices.

• **POSTMASTER:** Send address changes to *Approach*, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399.



pg. 2

FEATURES

2 My Delayed Ejection
LtCol. Dave Tierney
A 10-second delay nearly makes the difference for this Harrier pilot.

6 Gear Up and Nowhere to Go
Ltjg. J.P. Bingham
Two SNAs watch their IP handle an emergency.

8 Never Trust an A-6, or Anyone Else
LCdr. Neil Jennings
With only a standby gyro, and led by an A-6 crew, the Tomcat pilot and RIO try to get aboard.

11 Dipping Rotors
Lt. James D. Dean
An H-60 flight-deck hazard we should all know about.

12 Can You Believe the S-3 Had to Bingo?
LCdr. (Sel) Don Blair and LCdr. (Sel) Randy Lynch
Deteriorating weather and dwindling fuel cause this S-3 crew some anxious moments.

16 Button, Button, Who Didn't Channel the Button?
Lt. Andrew G. Mortimer
Sounds simple enough: punch the right button to change frequencies.

18 I've Done This a Hundred Times
Cdr. Al St. Clair
A variety of engine and instrument problems, coupled with bad weather, turn this FCF into something more interesting for these two aviators.

THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

approach

Volume 43, Number 3 March 1998

On the cover: The pilot of a Harrier II Plus of VMA-542 fires flares.
Photo by Rick Llinares

RAdm. R.E. Besal, Commander, Naval Safety Center
Bill Mooberry, Executive Director
LCdr. Mark Enderson, Head, Media and Education Support
Derek Nelson, Editor-in-Chief

Approach Staff
Peter Mersky, Editor
Laurinda Minke, Design and Layout

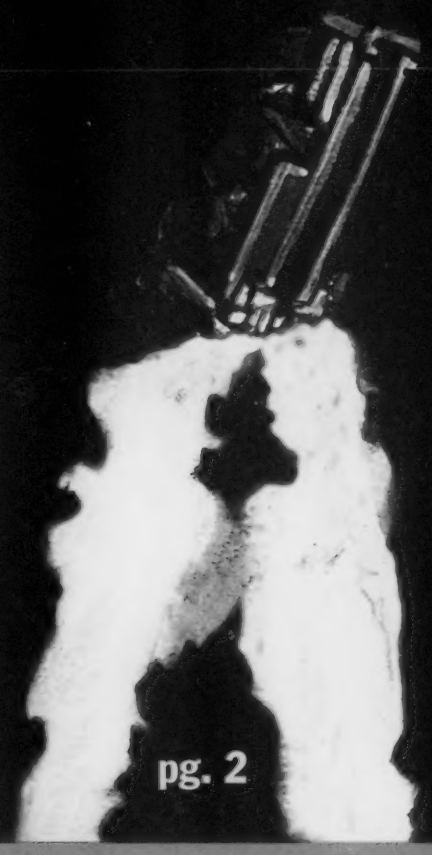
Address comments and contributions to:
Commander, Naval Safety Center
Attn: *Approach*, Code 71
375 A St., Norfolk, VA 23511-4399
(757) 444-3520 Ext. 7245
e-mail: menderso@safecen.navy.mil

For questions about distribution, contact Ginger Rives
e-mail: vrives@safecen.navy.mil

Homepage address: www.norfolk.navy.mil/safecen
NAVSAFECEN BBS (757) 444-7927/5857/5092
DSN 564

Approach (ISSN 0570-4979) is published monthly by the Commander, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399. *Approach* contents should not be considered directive and may not be construed as incriminating under Article 31 of the Uniform Code of Military Justice. Views expressed in guest-written articles are not necessarily those of the Naval Safety Center. *Approach* is available for sale by the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Subscription price: $33 per year. Telephone credit card orders can be made 8 a.m. to 4 p.m. Eastern time at (202) 512-1800. Periodicals postage paid at Norfolk, VA and additional mailing offices.

• **POSTMASTER:** Send address changes to *Approach*, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399.



pg. 2

FEATURES

2 My Delayed Ejection
LtCol. Dave Tierney
A 10-second delay nearly makes the difference for this Harrier pilot.

6 Gear Up and Nowhere to Go
Ltjg. J.P. Bingham
Two SNAs watch their IP handle an emergency.

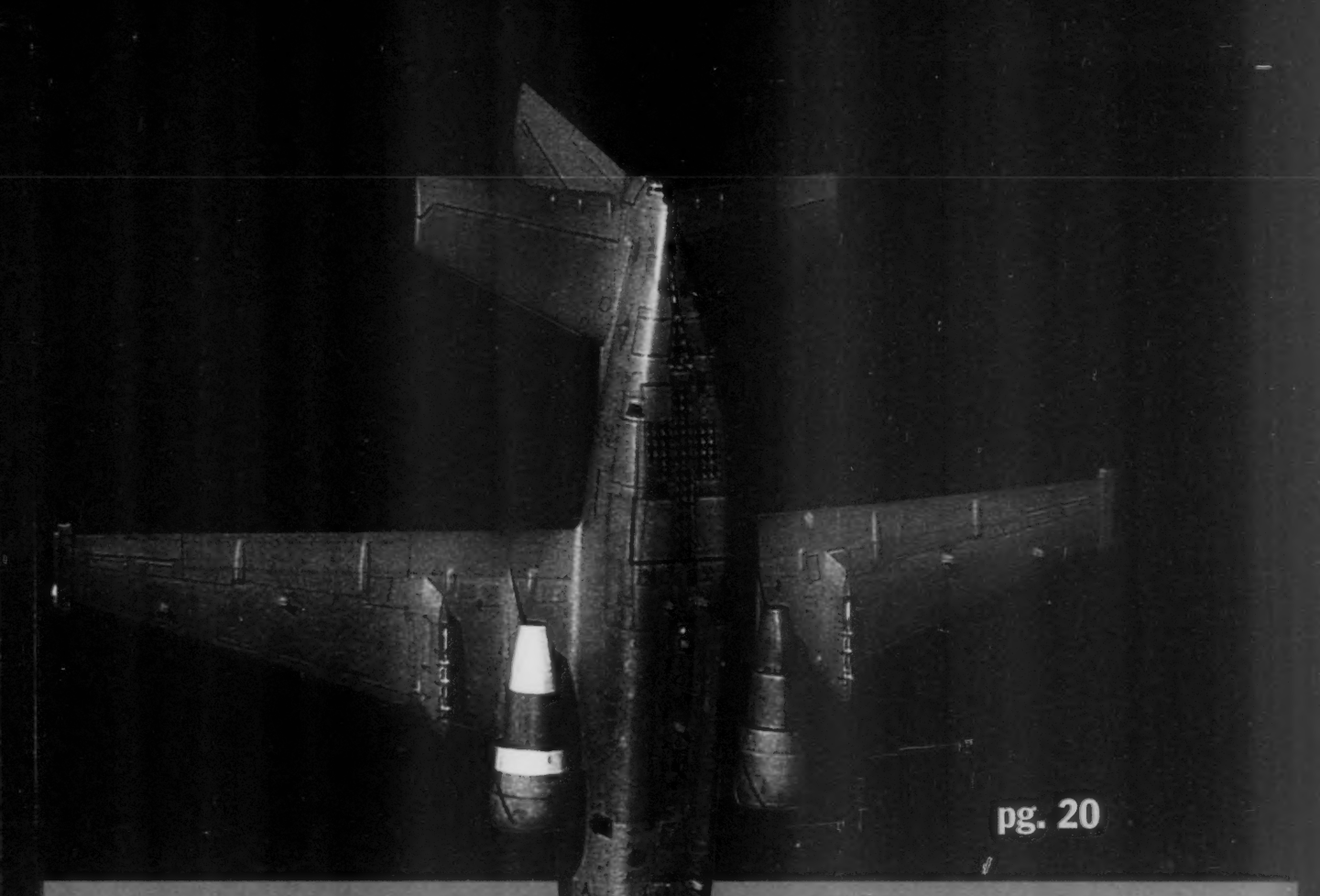
8 Never Trust an A-6, or Anyone Else
LCdr. Neil Jennings
With only a standby gyro, and led by an A-6 crew, the Tomcat pilot and RIO try to get aboard.

11 Dipping Rotors
Lt. James D. Dean
An H-60 flight-deck hazard we should all know about.

12 Can You Believe the S-3 Had to Bingo?
LCdr. (Sel) Don Blair and LCdr. (Sel) Randy Lynch
Deteriorating weather and dwindling fuel cause this S-3 crew some anxious moments.

16 Button, Button, Who Didn't Channel the Button?
Lt. Andrew G. Mortimer
Sounds simple enough: punch the right button to change frequencies.

18 I've Done This a Hundred Times
Cdr. Al St. Clair
A variety of engine and instrument problems, coupled with bad weather, turn this FCF into something more interesting for these two aviators.



pg. 20

20 Split-S Fiasco
LCdr. Ed Whalen
A training flight highlights the value of crew coordination.

22 My Fred Flintstone Impression, or To Hell Hole and Back
PR1 Chris Glodis
Setting the CO up for a great checkride nearly costs this eager crew chief his legs, or his life.

24 Shakespeare Said It Best: To Thine Ownself be True
Lt. Robb Webb

26 The Return of the Hot Ice Picks
Lt. Chris Bergen
Two articles that discuss the hazards of self-medication.

28 Soft Cat Shot
Lt. Michael R. Alexander
A tired shooter nearly puts this E-2 in the water.

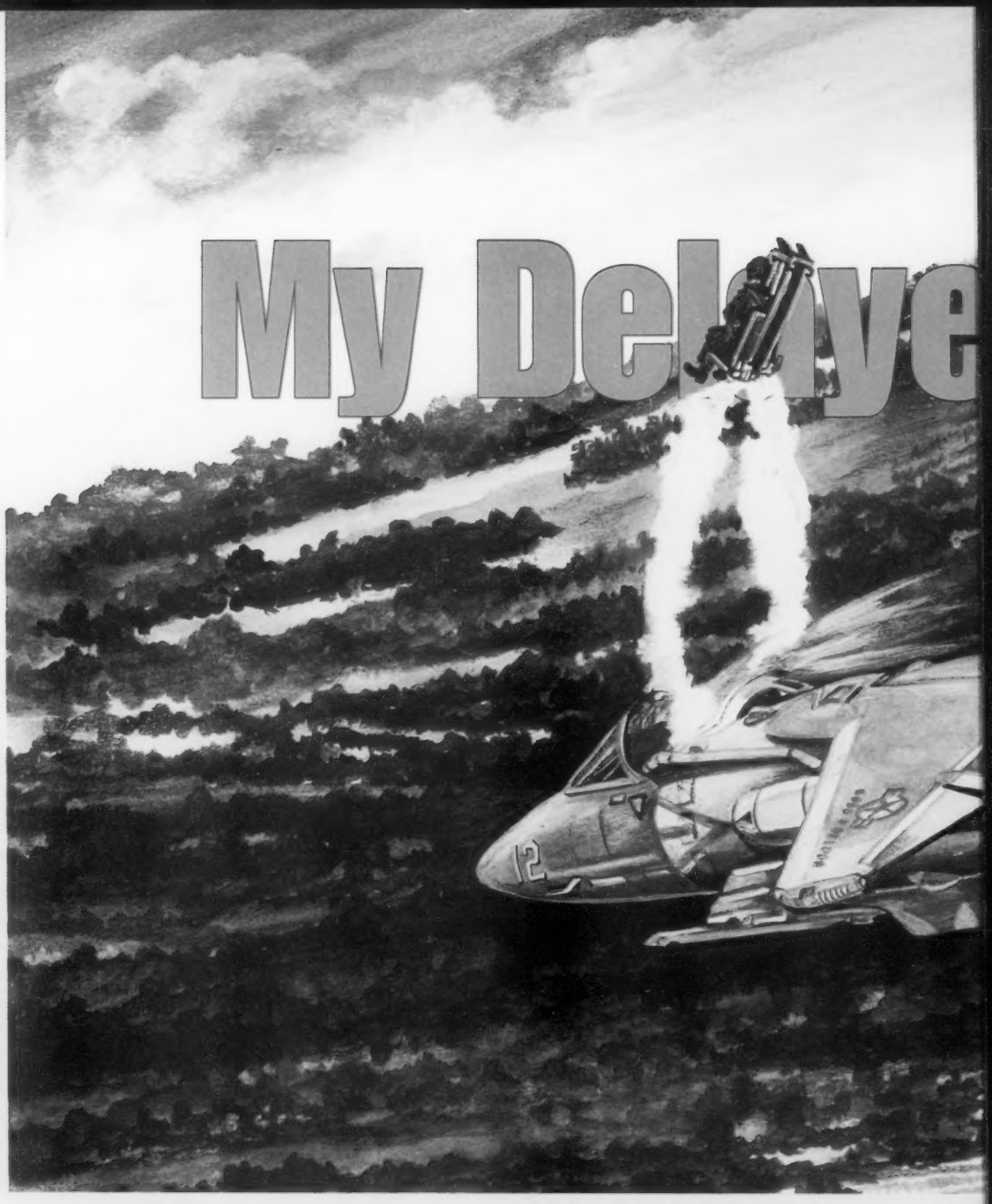
31 The Truth About Single-Seat Airliners
Col. J.L. Whitlow
Can we learn something more from mishaps?

DEPARTMENTS

14 Bravo Zulu:
VAW-120, VMAQ-3 and HC-85

30 Letters to the Editor:
Re: Lessons Learned (December '97)

My Delaye

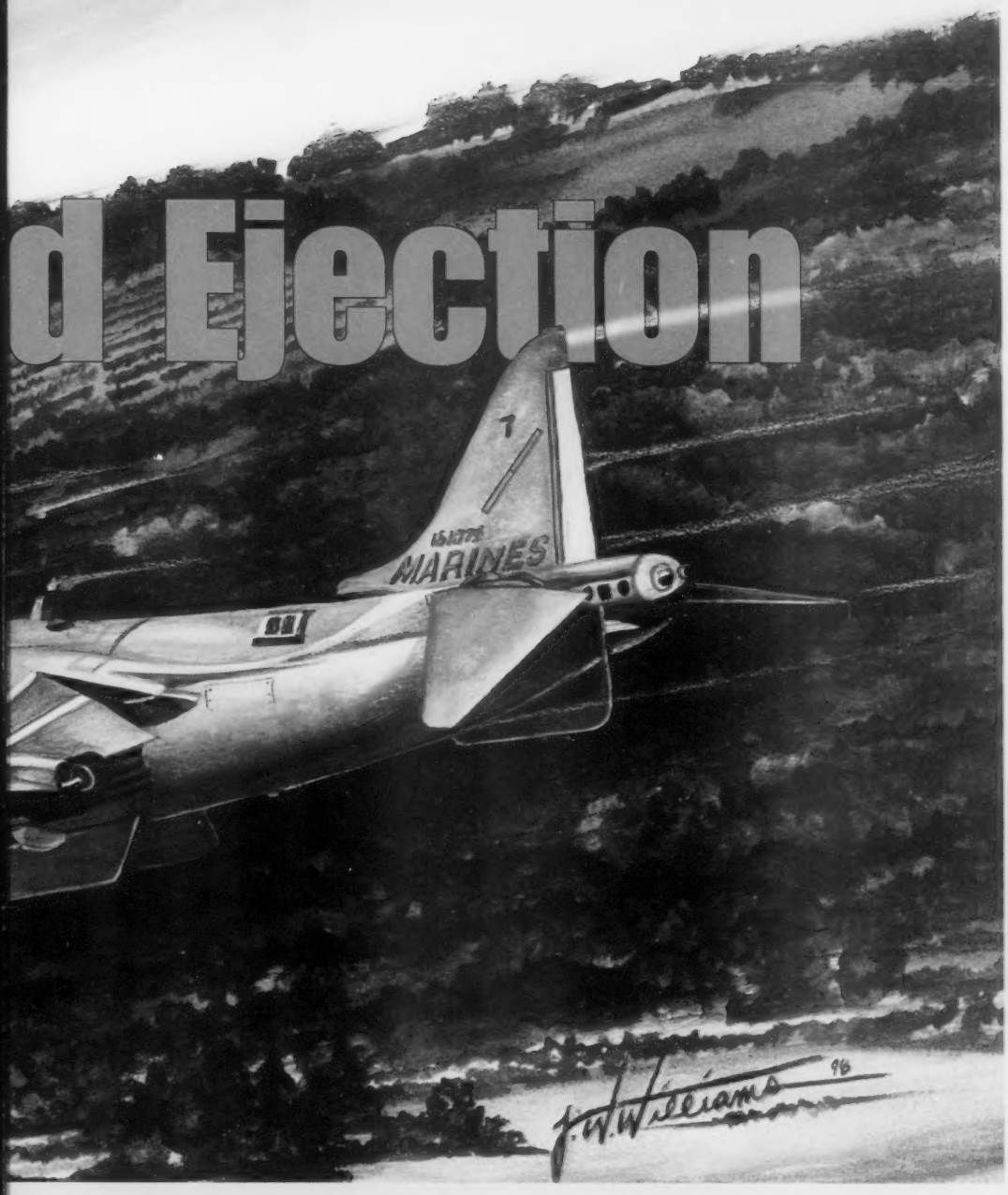


by LtCol. Dave Tierney

AFTER A SIX-MONTH MEU FLOAT as the OinC of a Harrier det, I had been assigned to another squadron as the operations officer. My "welcome home" consisted of being tagged as the JAG officer for the investigation of a fatal aircraft mishap only two weeks earlier. But before I could complete my investigation, I would find myself the subject of one.

Picture a beautiful North Carolina day in mid-October, temps in the 70s and not a cloud in the sky. One early afternoon, I was scheduled for a two-plane, low-level, navigation sortie flying a local VR route. Although I was the section lead, I was assigned the wingman position as Dash 2. The flight lead, a junior captain, briefed the sortie and covered all the safety items. We were to fly the entire route at 1,000 feet to comply with

d Ejection



wing requirements and to minimize bird-strike hazards.

Takeoff and the en-route portion of the sortie were uneventful, as was the first half of the low-level route. As we maneuvered against a simulated threat, I found myself on the right side of the formation, abeam the lead in combat spread. I was looking left to correct for a slightly sucked position when every single-engine pilot's worst nightmare came true. Severe vibration and rapid deceleration told me I had a big problem.

My airspeed was 420 knots, and the jet was level at 1,000 feet. At first, I thought I hit another aircraft that I had not seen. I shook the control stick to make sure that I was still flying and could control the jet. Convinced I had control, I turned my attention to the failing engine. A loud, rapid fluttering sound, much like a flag blowing in heavy winds,

was coming from the engine. The vibration was so severe that I had trouble reading the engine temperature and rpm.

I told the lead I had a major problem as I brought the throttle to idle and reached for the manual fuel switch. Before I could find it, my oxygen flow stopped. I activated the emergency supply to restore the flow, and I again reached for the manual fuel switch.

As I focused on the temperature gauge, I could not believe my eyes: it read 999 degrees (the limit). My only option was to shut the engine down and try for a relight. I moved the throttle to the off position and stared at the gauge to see if the temperature would drop to within limits for the relight.

After what seemed like forever, the temp slowly came down. However, I could not wait for the NATOPS-recommended limit because the ground was rapidly approaching.

I brought the throttle forward to idle and waited for indication of engine relight. I called that it was not looking good and that I was attempting a relight. Within seconds the temperature started to rise and I said to lead that I had a good relight. However, I stared in disbelief as the temperature gauge again indicated 999 degrees.

Now knowing the that my one and only engine was not going to relight, I told the lead that I was going to eject. I knew that I was still within the capability of the ejection seat as my now-gliding Harrier crossed Interstate 95 and headed east. Having been in the safety business a long time and been on many mishap boards, I decided to gather as much information about the aircraft as possible so that I could better assist the investigators.

I adjusted the mirrors so that I could see the rear of the jet to look for fire. Mistake number 1: I was delaying ejection after I had decided it was my only option. By now, the ground was rapidly coming up, and it was time to go. I told the lead I was ejecting and reached for the lower handle. I would estimate that I was at 1,100 feet and 250 knots at the time of ejection, passing over a heavily wooded area. I couldn't see any houses. Considering the terrain below me, I was not concerned about the jet causing damaging property or harming civilians on the ground. I grabbed the handle with both hands. The jet started a slow roll to the left as I watched the canopy explode and felt the seat start up the rails. The next thing I can recall is waking up on the ground.

The strange part is that although I was barely conscious, I felt the hard impact of the ground. I woke up on my back, and as I tried to get to my feet, I thought I was hurt until I realized my parachute was still attached and had prevented me from standing. Once I disconnected the koch fittings, I got to my feet and took stock of my body parts.

Looking around, I saw there were large pine trees everywhere, but as luck would have it, I just happened to avoid them all and landed square in the center of a small cotton field. I could see a column of smoke about half a mile away, which I knew was my jet.

My unmanned Harrier had sought out the only house within miles and crashed in the side yard, missing the house and barn by 200 feet. No one was hurt on the ground, but the retired senior chief living there had quite a scare. His wife had relatives flying in from Sweden later that afternoon and had told them not to expect any exciting times in the small town.

My unmanned Harrier had sough and crashed in the side yard, mis feet. No one was hurt on the gro living there had quite a scare.

Instead, they had a Harrier in their yard, hundreds of sight-seers all weekend, and dozens of Marines as "guests."

My vision was blurry, and I knew I was in shock as I took out my survival radio and told lead I was OK. He began the SAR mission as I walked around the field to see what was there. Within five minutes, the field's owner appeared in a pickup truck and came running over to me. Instead of asking how I was, he told me to gather up my parachute and to move to another field so that his cotton crop would not be further damaged.

Now, I really didn't feel like lugging my parachute and stuff a few hundred yards after all I had just been through, so I told him, nicely, no. He left upset.

Two overweight hunters appeared from the woods, and I thought one of them was going to have a heart attack. He was breathing so hard from running that I thought for sure the SAR team would be carrying both of us to the hospital. The rescue helicopter appeared in about an hour, and I was placed in a litter basket and hoisted up into the helo.

After a checkup at the hospital, my only injury was a black eye and a sore neck. I was flying seven days later, with a new appreciation of life.

Why did the engine fail? The mishap board found a small feather, and after having it analyzed, determined that a red-tailed hawk had entered the intake and blocked the flow of air through the engine. The temperature in the turbine section was so high that the blades melted from the loss of cooling air. My relight attempt failed because of the damage to the turbine blades during the locked-in surge.

Even though I had followed NATOPS procedures for loss of thrust and low-altitude flameout, there were some lessons learned from my mishap. Had I known that I had a bird strike followed by a compressor stall and shut down the engine more quickly, I could have minimized damage to the turbine blades.

I didn't know how fast the temperature can rise during a compressor stall and how important it is to quickly secure the engine if the stall does not clear by itself.

The second lesson is not to delay ejection. I've seen the movie "Ejection Decisions" and yes, I've read the MIRs where pilots have delayed ejection and died, but since I was still "flying" the jet, I delayed my ejection by about 10 seconds. Had the low-altitude mode of the seat not functioned or had there been additional delay in parachute opening, I might not be here to write this story. Once you've made the decision to eject, your next action should be to reach for the handle.

The third lesson is the most important. No matter how many times you've practiced an emergency in the simulator, it will never fully prepare you for the actual event. I've done relights hundreds of times in the simulator, but in this mishap, with the noise, vibration, and rapid deceleration all occurring at once, analyzing the situation was difficult.

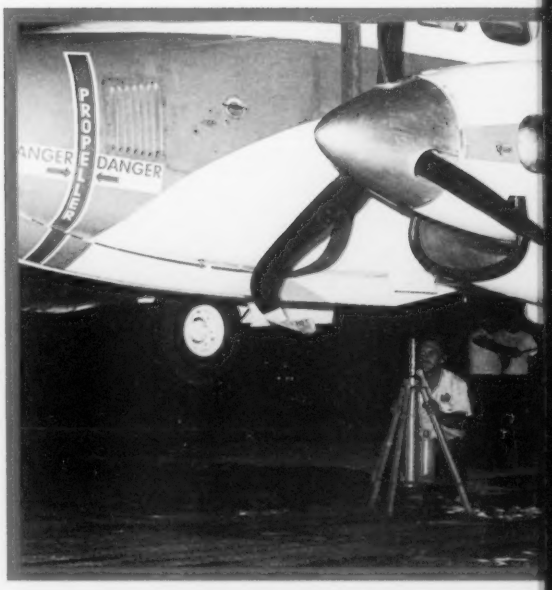
Placing the throttle in the off position, while only a few hundred feet above the ground, is no easy task for a single-engine pilot. The only way to prepare yourself is to know why you have to quickly react and then clear the compressor stall. Time is your enemy.

LtCol. Tierney is the CO of VMA-214. He has flown the AV-8 since 1981 and served a tour at the Naval Safety Center as the AV-8 analyst in the mid-80s.

out the only house within miles
ng the house and barn by 200
nd, but the retired senior chief

Gear Up and N

...the nosegear indicated dow
gear indicated unsafe. We also



by Ltjg. J.P. Bingham

It was time for FAM-1 in the T-44. As locked-on flight students, my partner and I got the gouge on our instructor ahead of time. He was currently working at the wing, taking a class so he could fly for the airlines, and he was known for being laid back. Nonetheless, we both studied to the max and arrived for the brief ready to answer any question and do the required maneuvers. It was a beautiful Corpus Christi day and we felt we were ready.

I don't remember much about the brief and prefight, the high work, or my partner's passes in the landing pattern that day. We were living by the gouge, and it seemed to be working.

What stands out in my mind is the series of events that took place once I hopped in the left seat for my chance to conquer the VFR pattern at NALF Cabaniss. On my sixth touch-and-go, things started happening. Our brief for a touch-and-go in the T-44 went something like this: "Once safely on the runway, reset flaps and trim and go to half-power quadrant. On engine spool up, call 'Go'. I'll set the power levers to max. Call 'rotate' at 91 knots."

At this point, the pilot at the controls would set the takeoff attitude. Once we were climbing, the pilot would call, "Gear up" (the only gear handle in the T-44 is on the copilot's side), and the copilot would raise the gear.

We touched down, and the copilot reset the flaps and trim as briefed. I went to half quadrant on the power levers. The instructor copilot observed, "Engine spool up," and called, "Go." I put the power levers to max. The copilot raised the gear handle, saw that we did not have a positive rate of climb, lowered the gear handle, took the controls, and flew us off the deck.

The other student later recalled hearing a loud popping noise near the main landing gear. I was now concerned for our safety and considered calling a training time out. I noticed that the nosegear indicated down-and-locked, but the two main gear indicated unsafe. We also had a light in the gear handle.

I remember telling the observer pilot (my FAM partner) we had an unsafe-gear-down indication and to please look it up in NATOPS.

At this point we terminated training and began functioning as a crew. A visual

lowhere to Go

-and-locked, but the two main had a light in the gear handle.

inspection by tower indicated the mains were down. Without a good down-and-locked indication, the instructor declared an emergency and headed for NAS Corpus Christi where we could get a better assist from the squadron RDO and the station's crash crew.

After several low passes, the RDO repeatedly confirmed that the mains appeared to be down-and-locked. We tried to land based on this information. On touchdown, the aircraft began to settle so the IP took it around. Now we somehow had a good down-and-locked indication on the right main and nose but still none on the left main. So, we climbed to the delta for more troubleshooting on base frequency. We had taken off around noon and it was now almost 1600. Needless to say, we were ready to get on deck.

After what seemed like an eternity of troubleshooting, briefing the what-ifs, and burning down to minimum fuel, it was time to land. Our configuration was a safe nosegear, a safe right main and a left main that was now fully up-and-locked because of our troubleshooting.

The IP made the smoothest, softest landing I think I've ever seen on the right side of our longest runway (8,000 feet). On deck, I did the emergency shutdown-on-deck procedures. At 40 knots, the left wing touched the deck along with the left prop, and we skidded gently to a stop right on runway centerline. I thanked the IP for saving our lives and climbed out.

We all got to talk to the tape recorder, go to medical that evening, and do more paperwork than I'd done since OCS. I think we had all learned three valuable lessons. First, don't lose situational awareness; stick to the correct procedures and habit patterns at all times.

Next, although IPs have far more experience than nuggets, they are human, and they make mistakes.

The biggest lesson is the one the IP taught me through his actions that day. He made an error, acknowledged it, and moved on. He exercised the skill that is possibly the most important one we develop in flight training: he compartmentalized. He put his error behind him and did a stellar job fixing the problem. This ability is what makes us naval aviators, not just pilots.

Ltjg. Bingham flies with VAW-113.

Never Trust an A-
or Anyone Else

6,

photo composition
by John W. Williams

by LCdr. Neil Jennings

RIO AND I LAUNCHED on a 4.5-hour CAP mission that started with a day preflight and ended with a night recovery. We were Dash 2 of a mixed section, Hornet lead. After about two and a half hours on CAP, we began experiencing problems with our CSDC and INS. After a couple of unsuccessful reset attempts, we lost all primary attitude references. Our only attitude information was the most excellent — but not that accurate — standby gyro. The moon was almost full, high in the night sky, so we elected to continue our mission.

Going feet wet over the Persian Gulf, it became apparent that the approach was going to be fairly dark. In the descent to marshal, we went down into that typical Indian Ocean haze layer that extends from around 2,000 feet up to 25K. There was plenty of moonlight, but no discernible horizon. It was one of those milk-bowl kind of nights, and it influenced our decision to ask for another aircraft to lead us down. (The Hornet pilot had gone on to fly the Southern Watch mission.)

We checked in with marshal and requested an F-14 wingman join us for the approach. There was no other Tomcat scheduled for that recovery, but marshal said there was one airborne somewhere to the north that could lead us down. I made the mistake of assuming they were actually in contact with that aircraft, although we couldn't raise them on base radio. To avoid hot areas, we were marshaled 60 degrees away from the stack and approximately 180 degrees from final bearing, in front of the ship.

After waiting about 15 minutes for our phantom wingman to join, I became concerned with how much fuel we had left. As I queried CATCC regarding the status of our yet unheard-from wingie, they replied, "Oh, he's feet dry right now; we think he's on his way."

That meant at least a 100-plus-mile transit and another 20-minute wait. At this point, I wasn't confident marshal actually knew where our wingman was, so I pointedly told them we didn't have enough gas to hold all night. They couldn't find the other Tomcat, so they started working on another plan.

Approximately 10 minutes and a thousand pounds later, an A-6 joined on our left wing. For the first time in more than an hour, things were starting to look good. We passed

the lead and briefed the approach. From a deep left downwind at about 6,000 feet, we got a descent and vectors to an 8-mile base leg. The A-6 crew didn't have time to get the section set up on a proper final with the vectors given. CATCC knew we had no primary attitude reference in our F-14, but they interpreted that emergency as a "get the jet on deck as quickly as possible" situation. Compounded by the fact that our lead made no effort to deviate from CATCC's vector and hadn't recommended a different course of action than assigned, our position made it hard to prepare for the approach. By the time my RIO and I recognized the situation, it was too late for another vector that would give us more time. The only good thing that happened on the approach was when CATCC asked to whom the needles should go.

Our pass was the dictionary definition of the proverbial "dog jumping in the back of a pickup truck."

"Give them to the A-6," I replied. At least he had good glide slope and lineup SA.

Descending though about 3,500 feet, at 8 miles, and 70 degrees off final, I said we were ready to go dirty. Neither the Intruder nor CATCC responded. Continuing down through about 3,000 feet, still 40 degrees off, and now only 6 miles from the ship, I said again that we wanted to dirty up now.

The Intruder crew quickly replied, "Gear and flaps, now." The next few seconds were exciting as we went quickly from mil to idle, then back to mil again, just to stay in position. The descent rate picked up a bit after that, and it actually began to seem possible that we might land on that approach. Our fuel was starting to get low, and we didn't want to go in the penalty box for another trip around the pattern.

As we cracked inside 3 nm at 2,400 feet with about 1,200 fpm descent rate, my RIO concentrated on monitoring altitude and rate of descent. At this point, the Intruder pilot displayed some awesome airmanship. He got us down to glide slope, and we were on-and-on just inside three quarters of a mile. Not stable on-and-on, though — actually, we were just passing through it.

I quickly called, "Tomcat ball, 5.0," and my lead detached and turned downwind. No problem, just a normal night straight-in from here, right? Yeah, except for the fact that we were still about 20 knots above on-speed and had a rate of descent that exceeded normal glide slope by at least two or three tick marks on our gauge.

The first two calls from paddles were immediate and emphatic — "Power," and, "You're low."

I added power, watched the ball go from two low to two high, made about three more corrections including full down DLC, and ended up on the 3-wire. Our pass was the dictionary definition of the proverbial "dog jumping in the back of a pickup truck." Although people later congratulated me for getting aboard, they didn't take the edge off being upset about having gone so darn low in the middle and having to make a play to get aboard. I was really surprised the LSOs took me. I expected a waveoff when I saw how low we went after the ball call.

There was much discussion later about what could have been done better by each of the players in this drama. If you are being put in a position from which it will be difficult to land, don't hesitate to suggest a delay vector for descent or for a longer straight-in. Never trust your lead or your controller. Always back them up by monitoring the situation. The person with the stick and throttle always has ultimate responsibility to get his machine and crew aboard safely.

LCdr. Jennings was with VF-213 at the time of this story. He now flies with VFA-97.

Dipping Rotors

John W. Williams

...I was shocked to see that the rotor-tip path had dipped to approximately four feet off the deck!

by Lt. James D. Dean

COMPLETING A COUNTER-DRUG mission in the eastern Pacific, we returned to our ship. After we landed, something happened that sent a chill down my spine.

With the rotors turning at 100 percent, I was in the right seat monitoring the controls of our SH-60B while my copilot secured the systems. Following the checklist, he secured the two main generators, leaving the APU generator to run our electrical system. Our dilemma started when he accidently secured the APU, which cut all electrical power to the aircraft. This loss caused the automatic-flight control and the trim system to drop offline. I rapidly shifted my scan from outside to inside to see what was happening.

When I glanced back outside, I was shocked to see that the rotor-tip path had dipped to approximately four feet off the deck! I stared at three startled deck-crewmen through my rotor disk. I immediately pulled back on the cyclic to bring the rotor disk back to a level attitude. Without trim holding the rotor level, and only a light grip on the stick, the tendency in H-60s is for the cyclic to fail forward, putting the rotor blades dangerously close to the deck.

After shutting down, I debriefed the incident with the flight-deck personnel. I emphasized the importance of remaining clear of the rotor arc and never letting anyone enter the rotor arc until seeing the pilots agree. The aircrew always brief that the pilot at the controls flies the aircraft while the copilot and the aircrewman troubleshoot any system problem. However, now I know we must follow this policy on deck as well.

Lt. Dean flew with HSL-48. He is now transitioning to the S-3 with VS-41.

Can You Believe t

...when we finally broke out, we were high and headed directly at the island!

by LCdr.(Sel) Don Blair and LCdr. (Sel) Randy Lynch

HAVE YOU EVER PLAYED the what-if game during a flight and after you landed, wondered what could have happened if you had actually had to follow through on your plan?

We were in the middle of the work-up cycle in the SOCAL op-area. It was winter, and we all know how brutal that can be. This day turned out to be very nasty.

Our weather brief predicted a 5,500-foot overcast layer with 5 nm visibility underneath. We planned for a Case I recovery and briefed accordingly as a spare for the event. The Hornets and Intruders were flying a practice strike into a local restricted area, and we were the spare strike-tanker.

After the "go" aircraft went down, we got the call. The plan was for us to drag the strikers out approximately 150 nm, then give 2,000 pounds of fuel to each of four Hornets. After the 8,000-pound give, we had around 7,000 pounds for ourselves, and an hour and 15 minutes until our recovery. We looked up the numbers and determined that we would have about 4,200 pounds on the ball. No problem. The old Viking was way back on the power, so all we had to do was work our way back to the ship and loiter overhead until our Case I recovery started.

As we made our way back to the ship, the weather deteriorated, going to 800-foot overcast with intermittent one-quarter to one-half nm visibility in rain. The ship quickly switched to Case III recoveries.

We anticipated another 30 minutes until our ramp time, leaving us with around 3,200 pounds on the ball. Still no problem, we thought, as we began our climb into the marshal stack.

Things started getting uglier by the minute. Since the ship was about 110 nm from North Island, our bingo fuel was around 2,000 pounds. We figured we would be able to get at least three looks at the deck.

However, neither departure or marshal were briefing the weather on button 7 or 17. They were only broadcasting that the ship had gone to Case III in intermittent rain.

The launch was slightly larger than usual because of the second wave of the strike proceeding inbound. The recovery finally began, and we figured we would be on deck in 15 to 20 minutes.

As we switched up approach to monitor the recovery, we realized that our air-wing partners were struggling to get aboard in the weather, and most were breaking out inside a half mile. The pattern became very full, and our approach time was delayed several times. Finally, it was our turn in the barrel. We pushed out of marshal with 2,800 pounds. The approach was uneventful down to 1,200 feet. We were still in the clouds with approach telling us the layer went down to 800 feet. They also briefed us that the ship was presently going through a "slight" obscuration with light rain and fog.

At one nm, there was no ship in sight. We were clara on the ball, and when we finally broke out, we were high and headed directly at the island! There was absolutely no

ne S-3 Had to Bingo?

time to transition from the needles to the ball. The LSOs quickly waved us off, up the right side of the ship, and it was around the pattern again with some new things to think about. Our fuel was now a concern. How did we get into this fix? How could the weather get so bad in such a short period of time? Were we really that close to bingo fuel? This wasn't supposed to happen in a Viking!

We broke out our PCLs and began to set-up for a bingo profile. North Island was 103 nm away, and we wrote down all the numbers for easy reference just in case. What if we didn't get aboard this time? What if we had to bingo? What if North Island was forecasting the same or worse weather? What if? Enough of the what-if's! Of course, we were going to get aboard this time — no problem. The ship and squadron reps then told us that we would be a bingo after the next pass.

"We'll get aboard," we replied.

The second approach was not much better than the first. Ever wonder how the ship manages to find the worst weather to hide under in the entire op area? This time we didn't break out until the last minute and were lined up left heading straight for the LSO platform. We were again waved off just as we broke out and were now at 1,900 pounds.

We got the old, "Hook up, clean up, climb… Pigeons to North Island are 033 for 105." We couldn't believe this was happening to us. But figuring our bingo numbers up front now paid off. In the climb, we calculated our fuel numbers once again and determined that it was going to be close. The profile would leave us with a 1,000-pound reserve on deck.

At about 60 nm out, we were able to talk to San Diego Approach, and the forecast for North Island was 1,500 feet, overcast with 5 nm visibility. What a relief. The forecast turned out to be accurate, and we recovered with priority handling from all the controllers. By the way, we landed with 1,100 pounds of fuel.

What did we learn from all this? An important lesson was to trust NATOPS; it won't let you down. Second and perhaps more valuable was to treat every what-if as if it could actually happen. Our flight briefs don't cover these situations by coincidence. The what-ifs may become what saves your life one day.

LCdr. (Sel) Blair and LCdr. (Sel) Lynch were with VS-29 at the time of this story. LCdr. Blair is now an instructor with VS-41.

BRAVO Zulu

BZs require an endorsement from the nominating squadron's CO and the appropriate CAG, wing commander or MAG commander. In the case of helo dets, the CO of the ship will suffice. A squadron zapper and a 5-by-7-inch photo of the entire crew should accompany the BZ nomination. Please include a squadron telephone number so we can call with questions.

Ltjg. John Hewitt
Lt. Christopher Quigley
Ltjg. David Dull
Lt. Robert Velez
Lt. Todd Watkins
Lt. Steven LeVert

VAW-120

The crew of Greyhawk 642 had just completed a passive-detection system mission in the Cherry Point operating area and was returning to NAS Norfolk. As Lt. Velez (copilot) deselected autopilot, the E-2 veered hard right. Lt. LeVert (CAPC) grabbed the yoke and stood on the left rudder, trying to regain control.

A glance at the trim gauge showed the rudder trim had run away to the full-right position. Lt. LeVert struggled to maintain flying speed and tried to free the rudder from its hard-over position.

Lt. Velez told the CIC crew what was happening as he helped Lt. LeVert fly the aircraft. If uncorrected, this trim failure requires the pilots to exert up to 170 pounds of pressure on the rudder pedals just to maintain straight-and-level flight.

Both pilots now had to work the rudders in tandem. In the meantime, the CIC crew — Lt. Hewitt (ACO), Lt. Quigley (CICO), and Lt. Dull (RO) — secured the weapons system, prepared the tube for a possible emergency landing, and backed up the flight-deck crew with NATOPS and communications.

Faced with a severe flight-control problem not covered in NATOPS, the pilots had to determine the best configuration for landing. As they headed for NAS Norfolk, they experimented with several different configurations to overcome the tremendous adverse yaw.

Back at Norfolk, Lt. Watkins (LSO) manned the LSO shack. After a detailed LSO brief and a discussion of controllability with the aircrew, Lt. Watkins suggested the crew bring the Hawkeye's right engine to flight idle and the port engine to max power, then fly a straight-in approach. This suggestion proved to be the best course of action, and Lt. LeVert made an arrested landing.

Postflight inspection showed the rudder-trim actuator had failed in the fully extended right configuration.

Capt. William L. Campbell, Jr.
Maj. Timothy M. Barrow
Maj. Thomas A. Dougherty III
Maj. Neil H. Rodenbeck

VMAQ-3

The Prowler crew launched from MCAS Beaufort and immediately encountered IMC (briefed weather was 300 feet, overcast, 1-1/4-mile visibility). At approximately 500 feet AGL, the aircraft lost its electronic flight-instrument system (EFIS). The electronic attitude-director indicator displayed the "Attitude Fail" warning, and the electronic horizontal-situation indicator was frozen. The secondary attitude-reference indicator (ARI) displayed an off-flag. All engine instrument, tacan, and GPS displays were also gone.

Maj. Barrow (pilot) immediately checked the altimeter and VSI to make sure the aircraft was still climbing. He alerted the crew and requested the status of the aft-cockpit ARI. Maj. Dougherty (ECMO 2) reported the aft ARI was working and began giving the pilot attitude calls. The crew declared an emergency and continued to climb until reaching VMC at 10,000 feet.

Once in VMC, Maj. Barrow leveled off and established an orbit as he and his crew assessed the electrical failure. They didn't know a Kapton-insulated wire had exploded, severing four other wires in the bundle and caused the electrical failure, which at the time could not be associated with any specific NATOPS emergency procedure.

With no attitude reference available to the pilot and not knowing the extent of other system failures — such as flaps, slats, landing gear, antiskid, and nosewheel steering — the crew coordinated with controlling agencies to have another aircraft in the area join to help.

The only aircraft available was another squadron aircraft on deck at MCAS Beaufort preparing for takeoff. The first Prowler was holding northeast of Beaufort. Departure control vectored the second aircraft to a rendezvous. Once joined, the second Prowler led the flight to Cherry Point, where the weather was better.

The section made an "actual" instrument section GCA approach. Once the first EA-6B's crew had the field in sight, the aircraft separated and landed.

The crew received Navy and Marine Corps Achievement Medals for superior airmanship and excellent aircrew coordination.

ATAN Frankie Garcia
AT3 Steven Williams
LCdr. Paul Dragos
LCdr. Joe Christman

HC-85

The crew of IZOD 616 dropped off their passengers and gear after flying to NALF San Clemente Island for a week of Southern California Offshore Range operations. They water-washed their engines, then headed to Wilson Cove to get torpedo-recovery qualifications for ATAN Garcia (second crewman).

After four recoveries — about 20 minutes — they flew back to the field to pick up the Mk-4 (Papa) weapons-recovery cage. Three times, the recoveries went smoothly. On the fourth, LCdr. Christman (HAC) was at the controls. Shortly after giving verbal control to ATAN Garcia, the crew heard a loud rumbling and banging.

The sound of the engines changed drastically, and the crew felt the aircraft shudder.

LCdr. Christman lowered the collective and jettisoned the cage. LCdr. Dragos (copilot) went to full power on both engines and began dumping fuel. The H-3 rapidly lost altitude. The crew recovered and stabilized the helicopter just 10 feet above the water.

They regained a low, 20-knot hover-taxi and began troubleshooting the emergency. Because of the strength of the banging, the crew thought they had a high-speed shaft failure. They began ditching procedures, but LCdr. Dragos noticed that the rotor speed remained above 92 percent. The No. 2 engine had low torque and high power-turbine inlet temperature. The No. 1 engine was carrying the load, but both generators had dropped offline.

There was also a fire light for the No. 1 engine, and the aircraft had a healthy yaw.

AT3 Williams saw no secondary indications of an engine fire, and LCdr. Dragos assured LCdr. Christman that the rotor speed was stable and they should be OK. After making a slow transition to forward flight, the crew climbed and declared an emergency. As they moved forward, the engine banging stopped. On the way to San Clemente, after achieving safe single-engine airspeed, the rotor speed increased, and the fire light went out. Because of the overtemp and compressor stall, the crew decided to pull the No. 2 engine back to ground idle.

The crew did the landing checks and made a running single-engine landing on the runway, shutting down the No. 2 engine after they were safe on deck. The HAC told the two crewmen to remain strapped in. The cargo hook was destroyed when it dragged on the ground.

An EI is underway to determine the cause of the initial problems with the No. 2 engine.

Button, Button, Who Didn't Channel the Button?

We were low and going l responded with max pow warning, the waveoff lig snagged the 2-wire after the 1-wire.

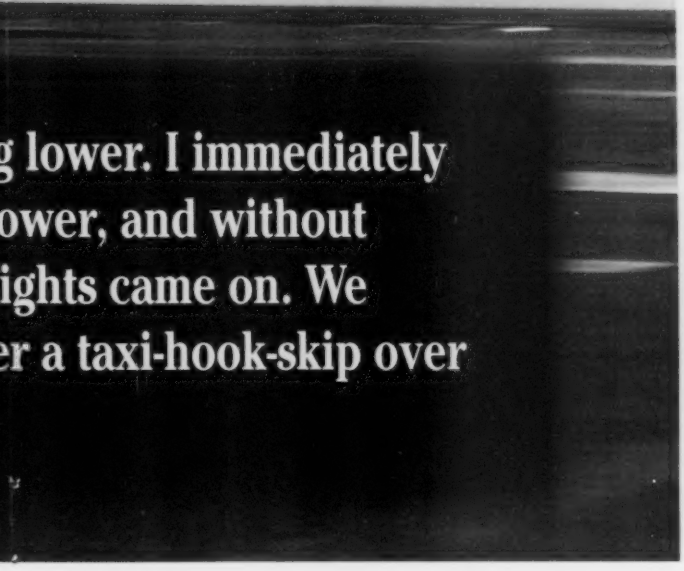
by Lt. Andrew G. Mortimer

On MY SECOND FLIGHT AS A CAPC, a functional check flight, we had to check the E-2C's flap system. We briefed the flight, and since it was the first day of zip-lip recoveries, we covered that area as well. Our Hawkeye had recently undergone several weeks of maintenance in the hangar bay for corrosion gripes and repairs to the flap system.

We manned up and launched on time. We checked in with strike for our radial-DME assignment. As we headed for our assigned radial, the DME failed. No problem. Our inertial system and the folks in the tube still had a good fix on mother.

When we completed the flight, we headed back for the boat and checked back in with strike. We told the controller

PH2 Jason L. Cooper



about our tacan problems, and he said it was a Case II recovery. Another E-2 was also recovering this cycle.

We called marshal and asked to join up and recover with our squadronmate. On our vector to the marshal point, we called our playmate and went through a form brief on our tactical frequency. We saw the other aircraft and joined up.

At our expected approach time, we pushed inbound to mother and started our approach.

Lead called, "See you at ten," and we switched to button six. At this point, I quickly reviewed the high points of the zip-lip recovery with my copilot. Our section pressed on to the initial, and lead broke at the bow. We continued upwind and broke inside of a mile.

Off the 180, my copilot reviewed the landing checklist, complete with hook down. It would soon be my turn to fly the ball. I picked up a slightly high ball passing through the 90. Tomcats parked on the patio obscured the ball as I passed through the 45.

Rolling out on centerline, I looked for cut lights.

"Did you see them?" I asked my copilot. He hadn't.

This situation didn't seem right. Was the deck fouled with my interval? I asked my copilot to call the ball. Something still didn't seem right. In close, I saw the cut lights. Wrong! It was a power call.

We were low and going lower. I immediately responded with max power, and without warning, the waveoff lights came on. We snagged the 2-wire after a taxi-hook-skip over the 1-wire. Everything had been going so well. What happened? We didn't have button six properly channelized.

Three days before, air ops changed the frequency for button six. While the ATs channelized the three birds on the roof, our aircraft was still in the hangar bay getting other much-needed attention.

Like most incidents, our experience came from a chain of events: improper channelization, a below-average pass, poor crew coordination, and starboard winds. The LSOs made several power calls as I settled in the turbulent air caused by the winds. Unfortunately, I never heard those calls or the subsequent calls to wave off.

I now include radio channelization in my preflight. We were fortunate the problem didn't deteriorate into a hook slap or, worse, a ramp strike or off-centerline engagement. I took my no-grade and learned from this experience.

Lt. Mortimer flew with VAW-117. He is now the safety officer for NAS North Island where he also flies C-12s.

I've Done This a Hun

by Cdr. Al St. Clair

It was my 91st functional check flight in the TA-4J. The morning sky was clear with a low deck to the west moving east. Check flights in the A-4 rarely take an hour, so I wasn't worried about the clouds. Getting another aircraft up for the 100 sorties of the day was a priority for me as the squadron operations officer.

I was in one of several A-4s at the hold-short at 0700. My best friend in the back seat said we could probably bang out three of those flights by noon. There were always plenty of FCFs in a squadron of 70 aircraft.

Takeoff and climb were normal, and the cold, crisp winter air helped us get to FL 370 in no time. We were looking down and could see the low deck just covering our outlying field. No biggie, it was only 10 miles from home base. My concern was that the deck might preclude any more FCFs. You never miss a runway until you need it, as my buddy and I were about to discover.

We were pushing over to descend for the mach-controllability check when my backseater noticed that the engine-oil pressure was fluctuating. Because this FCF was for an engine change, it took about two nanoseconds before we pointed our .9-mach rocket toward home field.

Descending through 15,000 feet and switched to approach, we discussed the outlying field, but we ruled out making an emergency landing at an uncontrolled field with no instrument approach and going through a solid deck below 1,000 feet AGL. Our oil pressure kept fluctuating out of limits, and the range was increasing beyond the maximum allowed.

We remained calm, and approach gave us priority. We would be on deck in less than five minutes, and I could see home field. As long as the engine held up, we would be back in time for lunch at the club.

The following events explain why the Navy has gone to multi-engine, multi-navigational aircraft. While maintaining a visual on home field, neither of us had noticed that our heading source and tacan had started spinning. This experience isn't uncommon in the A-4, and it is one of the reasons it is primarily a day-VFR aircraft.

The reason I had noticed the heading problem in the first place was a distracting red glow on my glare shield. As I came back into the cockpit to see what that light was, my first thoughts were that if this was a fire-warning light, we already had secondaries (the oil-pressure problem), and we wouldn't be back for lunch. My backseater was the first to identify the light as a low-fuel light, another common occurrence in the A-4, and we didn't have to ride the rocket just yet.

As we passed 3,000 feet at 15 miles out, approach switched us to tower. Passing 2,000 feet, a funny thing started happening. The visibility that was so good when we were looking down started deteriorating. As the sun comes up on a cool day in a swampy area, so does the moisture in the form of a visible layer.

I lost sight of the field, in a jet with a few minutes of gas remaining, a bad tacan, and an oil-pressure problem. Looking back in my rear-view mirror, I noticed my buddy no longer had his arms resting on the canopy rails — it was a sure bet where his hands were. Even before the days of political correctness, I couldn't repeat what he said over the ICS.

No longer calm, we quickly switched back to approach for vectors. Thanks to those ATC guys, we found home field with no delays. The straight-in precautionary approach went without a hitch, and for the first time in about five minutes, I could actually remember my name.

We were the happiest two aviators you have ever seen (and maybe the palest) as we climbed out of our Skyhawk. I was in such a good mood that a remark from maintenance control about bringing back a down jet didn't faze me.

In retrospect, a lot went wrong on this flight from hell. It started out with my thinking that this was a routine FCF (if there is such a thing), and contemplating my next hop. How many times have we been lectured on compartmentalization? Second, it turned out to be a pretty big

dred Times

deal that our outlying field was clobbered. The oil pressure and low fuel turned out to be not just a bad gauge, but the real thing, and those extra five minutes of flight time became critical. The good weather we had until the final few minutes had lulled us into a false feeling of security. What did the weather guy say about temperature-to-dew-point spread? Is it that important on a clear day?

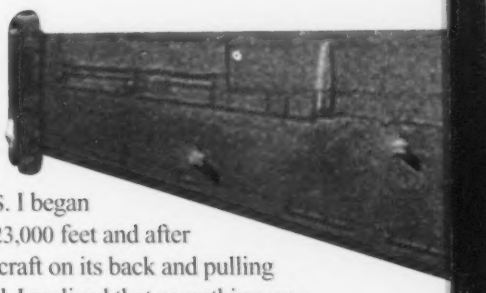
My backseater and I were both experienced aviators with more than a thousand flights in the A-4 between us. Were it not for the fact that we had plenty of airspeed and got prompt handling by ATC, we might have needed more time to get on deck than that P-6 was going to give us.

They say a superior pilot is one who stays out of trouble by using superior judgment to avoid situations that might require superior skills. You can bet that we never again decided in advance that a check flight was going to be routine. It was a long time before either one of us volunteered for another FCF.

Cdr. St. Clair flew S-3s with VS-33. At the time of this flight, he was an A-4 instructor in VT-7. He is now an instructor at the Air Command and Staff College, Maxwell AFB.

Split-S Fias

by LCdr. Ed Whalen



It started out as a nice fall day in Southern California. We were scheduled for a 2.5-hour flight, but first we had to fly several simulated tactical air launched decoy (TALD) profiles. The weather was 6,000 and broken with seven miles visibility. Maintenance was kind to us, and we had a fully mission-capable jet.

Our crew consisted of a mid-tour SENSO and TACCO, a newly assigned COTAC and me, a senior pilot. The brief, man-up and taxi were uneventful and moved along quickly. After takeoff, we climbed toward the warning area and prepared for our TALD profiles. We were to check the launch envelopes at altitudes ranging from 22,000 to 28,000 feet. Everything was going fine, and we were collecting valuable information for our conventional-weapons officer. After the last profile, things started going wrong.

I had briefed that after the last profile, we would slow to 180 KIAS and do a split-S to reduce our altitude. This was a perfectly acceptable plan—if I had flown what we briefed. After the last profile, I raised the nose of the aircraft to reduce the airspeed from about 340 KIAS to 180 KIAS. At this point, I'm not sure what happened. I think I looked at the airspeed indicator and saw 180 KIAS when it actually read 280 KIAS. I began the split-S at 23,000 feet and after rolling the aircraft on its back and pulling for the ground, I realized that something was wrong. The nose of the aircraft was pointed almost straight down. The throttles were at idle, airspeed was building, and the nose had stopped tracking back toward the horizon.

The control stick had become useless, and I released it. I deployed the boards and started running the pitch trim to full nose-up. The cloud deck was at 8,000 feet and was quickly closing. I thought we would have to eject and be seriously injured, if not killed because of our speed.

Throughout this entire sequence, no one in the crew said a word.

The nose finally started coming back, and we bottomed out at 8,000 feet, skimming the top of the cloud deck. After we all took a deep breath, we continued the hop and landed without further incident. An inspection determined we had not overstressed the aircraft.

Chris A. Buhlmann

SCO

The nose of the aircraft was pointed almost straight down. The throttles were at idle, airspeed was building...

I learned several things in the debrief. Both NFOs knew we were at 280 knots but didn't say anything because they thought I knew what I was doing. The COTAC did not realize how dangerous a situation we were in. Last, I discovered I had not been talking to the rest of the crew.

Our crew coordination had failed. Each crew member must work with the others. No one should be left in the dark or be afraid to voice his opinions. If someone had spoken up, we would never have gotten ourselves into such a predicament.

Finally, I learned you have to check and recheck everything. I misread the airspeed, and although my brain knew something was wrong, I pressed on. If I had taken that extra moment to recheck the airspeed, I am certain I would have caught my mistake.

LCdr. Whalen was an instructor pilot with VS-41 at the time of this story. After a tour at NAS Oceana, he is going through refresher training at VS-41.

by PR1 Chris Glodis

AS AN AIRCREW INSTRUCTOR at the Navy's H-46 FRS, I was scheduled to hot-seat into a two-hour hop. We would be giving the CO a NATOPS warm-up flight — my chance to impress the new skipper with tricks of the trade, learned over my years as a crew chief. Yep, tricks learned over 17 years of flying, two tours as an FRS instructor and 4,245 flight hours. I knew the Phrog like the back of my hand.

The crew met for a standard NATOPS brief — ACT, emergency throttle, I fly, I talk. You fly, I give emergencies. After the NATOPS crew brief, the instructor pilot and I sat down for our "secret brief," discussing what emergencies we would use to victimize the CO.

"Let's see," he began, "how about transmission failure, AFCS electrical failure, compressor stall, inflight engine fire, and whatever else we have time to complete."

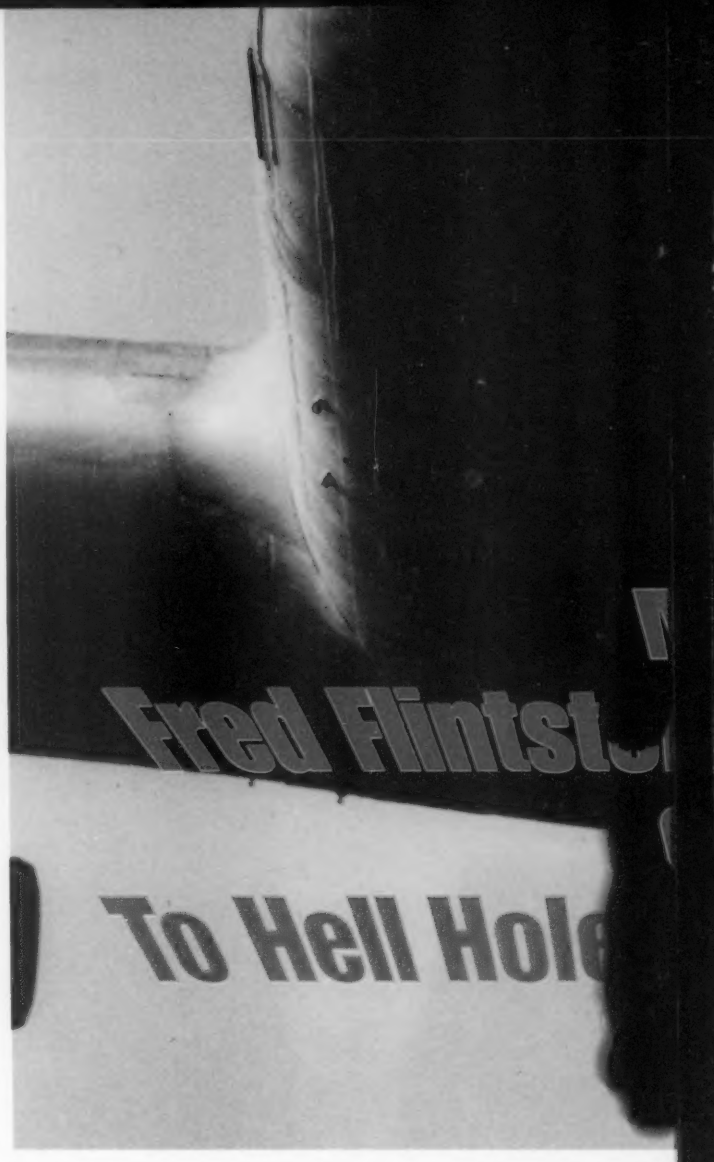
"Compressor stall? Yeah, that's a great one!" I agreed. "I can open the hell-hole door and slam it down real hard so it sounds just like an explosion. Not only does it get everybody's attention, it also adds to the realism of training."

"Compressor stall? Yeah, that's a great one!" I agreed. "I can open the hell-hole door and slam it down real hard so it sounds just like an explosion."

We planned to start with an engine fire on deck, then fly clear of the control zone and start a SAR scenario, during which we would introduce a compressor stall while in a hover. We would do our emergency procedures, come up on emergency throttle to restore power on the stalled engine, then fly to OLF Imperial Beach. Simple.

The hot seat went as planned. The departing crew told us, "Good bird, no problems, have a good flight."

As we taxied to pad 3 for takeoff, I initiated the simulated engine fire. "Sir! I have a fire in the number two engine bay, simulated."



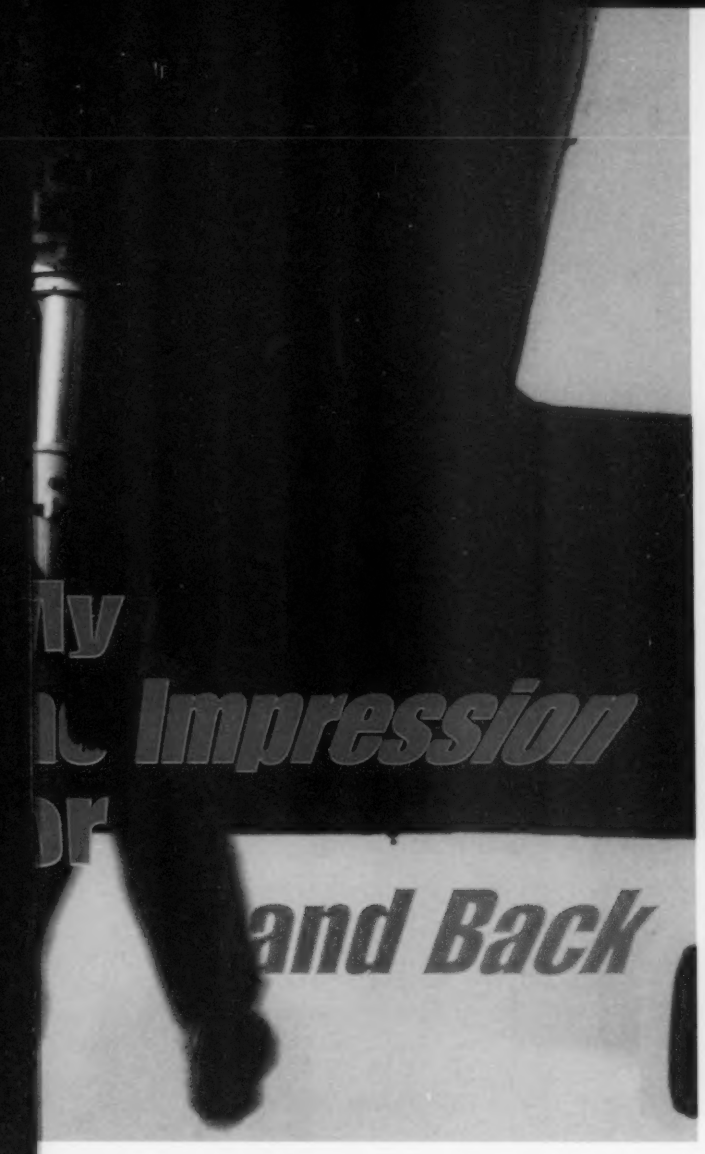
The CO handled the simulated emergency like a seasoned veteran, and we cleaned up the cockpit before taking pad 3. Shortly after takeoff and an operations-normal check, the HAC informed us we had a simulated boat on fire six miles to the south.

The CO jumped into action. "Roger, rig aft for rescue, check winds, break out the SAR TACAID, sector search and a race-track pattern to a 50-foot hover."

As he guided us through the simulated SAR scenario and into a hover, the HAC foreshadowed the impending compressor stall, "Sir, I have a slight rise on number two engine T5, simulated."

I played along, "Light salt-spray, simulated."

The scenario was progressing as planned.



Kaboom! I slammed down the hell-hole hatch and grinned when the skipper flinched. He began the immediate memory emergency procedures, and I started paging through the checklist. We headed for OLF Imperial Beach.

"We have aft-transmission temperature fluctuations, *not* simulated," the HAC said as he pointed to the gauge. I went aft to check the wires on the aft-transmission temperature bulb. After troubleshooting and some discussion, we determined a loose wire was causing fluctuations and decided to continue the hop. I went back up front to help the CO with the checklist. We continued with the compressor stall scenario and landed on pad 2 at OLF Imperial Beach.

After landing, we cleaned up the cockpit and prepared for a max-gross takeoff. As the helicopter lifted into a hover, I noticed that the rotor wash was making the hell-hole door vibrate.

"I need to fix that," I thought and quickly unstrapped to move aft. I decided to disconnect the fuel-signal conditioner, just to see if the Old Man would catch it. I secured my gunner's belt to the deck, and as I reached for the fuel-signal conditioner cannon plug, I stepped right through the open hell hole!

Wham! Snap! Crunch! Aircraft centerline plugs, belly light, main mounts, this was all wrong. My left arm felt like it was being eaten by a T-Rex.

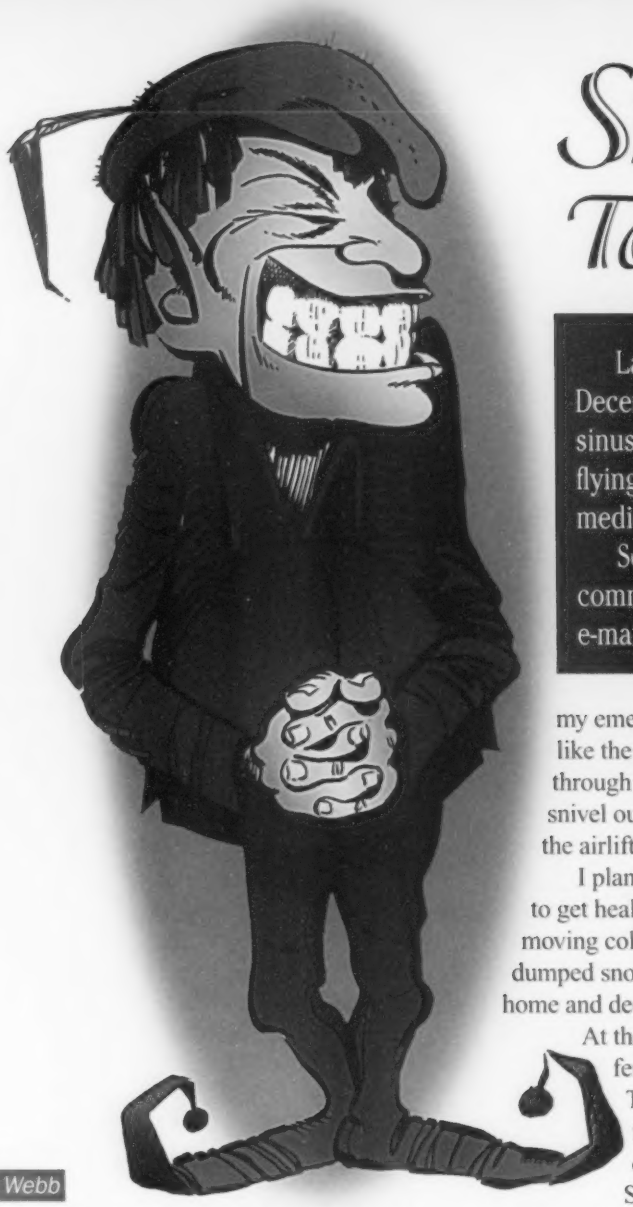
"Calm down, clear your head, assess the situation," I told myself.

First, I was hanging under the helicopter. Two, because there was too much slack in my gunner's belt, my arm, now sandwiched between the hell-hole door and the hell-hole frame, was supporting my 220 pounds plus the weight of my flight gear. Third, my ICS cord had disconnected when I fell, so nobody knew I was out here. Finally, the flight around the pattern was going to really… "Wait a minute, max-gross takeoff… hover, set power, land, take off," I thought. I liked that "land" part.

We finally did land, and I crawled back inside the aircraft. My ICS was not working, so I loudly explained to the pilots that I stepped through the hell hole, *not* simulated. Any other maneuver, and I would have been slung around the pattern like a vertrep load. Fortunately, I survived with only some scars and one hell-hole of a story.

Too often, we try to make training realistic by adding to a scenario. I was so busy doing this, I lost the big picture. The emergencies we simulated could have been done more safely and more effectively.

PR1 Glodis flies with HC-3.



Shakespeare To Thine Ow

Late winter and early spring are cold seasons.(December 1997 issue, we described how a Prowler sinus block. This over-the-counter medication, hov flying with a cold and could foster a dangerous fals medication, any flight doc will tell you, "Don't!"

So, to admittedly stir the pot a little, here are t comment from the Safety Center Surgeon. Yes, we e-mail on this subject.

by Lt. Robb Webb

It was one of those rare good deals. Because the weather back in Texas was the typical winter trash, the squadron sent a bunch of us students to NAF El Centro to generate some ACM "X's." Raging around the CAVU desert in TA-4Js, mere sorties away from wings — it just doesn't get any better.

At the end of two weeks, our confidence was sky high, and we were looking ahead to upcoming carrier qualifications. Unfortunately, the combination of the desert dust and an oncoming head cold concerned me. As I closed the canopy while taxiing for a 1 v 1 hop, I knew things were not right.

My sinuses protested the slight overpressure on deck, but I could clear my ears, so I pressed on. After all, I had my emergency bottle of Afrin in my flight suit, just like the doc recommended. After barely making it through a slow descent from the MOA, I decided to snivel out of the next day's flying and asked to catch the airlift home in two days.

I planned to spend the next day in the rack trying to get healthy, but things changed quickly. A rapidly moving cold front descended on Texas and had already dumped snow on Dallas. Ops wanted to beat the storm home and decided to launch the Skyhawks immediately. At the same time, they insisted that we not just ferry the jets but fly air-navs on the way home. This left me in a tight spot. I knew I was not feeling 100 percent, but the squadron made it clear they had to justify every flight hour. Since I could still clear my ears, I decided that I could probably hack it.

The single leg home was right on the edge of a TA-4J's max range, necessitating a high-profile ramping up as the plane got lighter. To make matters worse, the weather forced us to deviate from our planned route. Two hours into the flight, I knew we were looking at an idle descent from the high 30's. Cabin pressure was in the mid-20's as I started the penetration.

As the cabin pressure stabilized at 8,000 feet, I felt a blinding pain in my forehead. I immediately leveled off and had the IP take the jet. I inhaled half my Afrin bottle to try to make the pain stop. By now, I was nearly incapacitated with pain from my front sinuses. The IP quickly reminded me that we had to get down now for fuel.

Said It Best: nself be True

course, you can get sick at any time. In the rewman thought he could use Afrin to overcome a ver, is not likely to prevent the complications of sense of security. As with all episodes of self-

) more articles, supplemented by a definitive ll accept calm phone calls, short faxes and

Robert Trotter
color - Laurinda Minke

By the time we leveled at 2,000 feet, the pain had subsided a little, and I could land the jet myself. Walking back to the hangar, I noticed blood in my mucous, and I knew I had done some serious damage.

The flight surgeon confirmed what I suspected and promptly grounded me. After two months of antibiotics, sinus operations, pressure chamber rides and watching all my classmates get winged, I was finally back in the cockpit, much wiser about my personal limits and instincts. You have to learn when to put your own concerns ahead of squadron plans. As Shakespeare said: To thine ownself be true. Later, when I was a sergrad in the same squadron, several students learned the hard way, as I had, by injuring sinuses and eardrums.

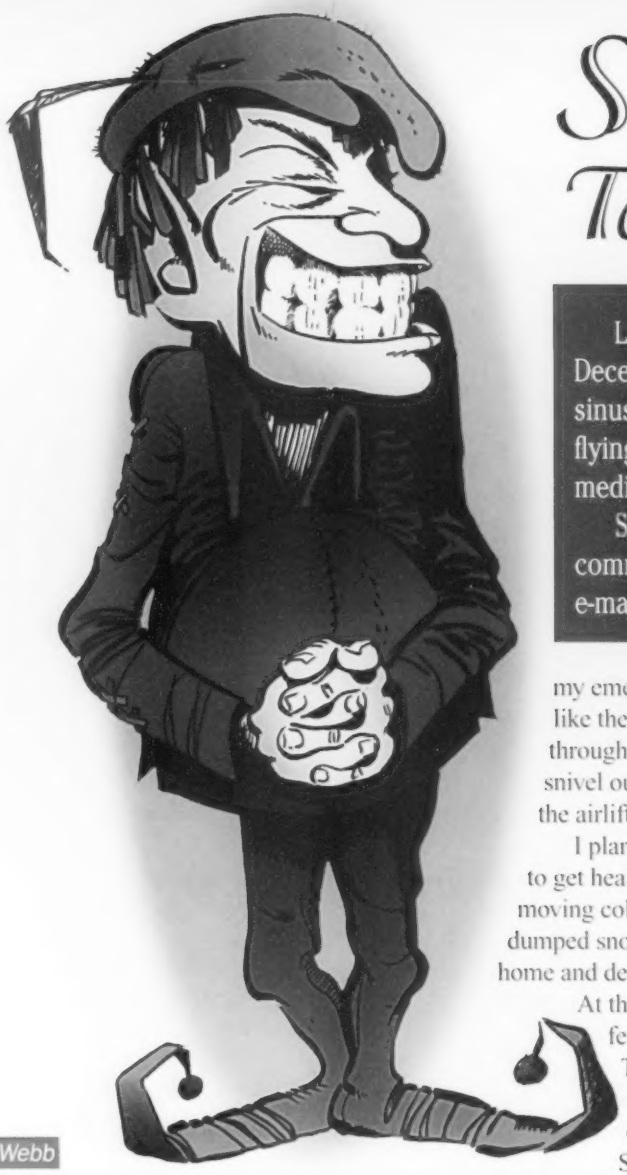
A bottle of Afrin won't save you when you know you shouldn't be flying.

Lt. Webb flies with VFA-86.

A sinus block can be painful, disabling, and may result in a prolonged recovery. But the dangers of flying with a cold may go far beyond the complications of a sinus block. When you have a cold, the associated inflammation and swelling of the mucous membranes throughout the respiratory tract could include problems with the inner ear and the vestibular apparatus that is responsible for balance and sense of position in space. If a cold causes problems with your inner ear and vestibular system, vertigo and spatial disorientation could develop. These medical complications would be far more disabling than a sinus block.

The aviator in this story decided he could fly with a head cold and hack it, partly because he had his "emergency" bottle of Afrin tucked in his flight suit, "just like the doc recommended." The flight surgeon in the story didn't do anyone a favor and was partly responsible for the false sense of security that could have led to a disaster.

Afrin did not prevent the complications of flying with a cold, and it is unlikely that it will. Afrin is not an authorized medication for aviators in a flight status. If an aviator's condition warrants the prescription of Afrin, the flight surgeon should consider temporary grounding. A bottle of Afrin should never let you feel you can fly when you shouldn't.— Capt. James Fraser, MC, Naval Safety Center Surgeon.



Shakespeare To Thine Ow

Late winter and early spring are cold seasons.(December 1997 issue, we described how a Prowler sinus block. This over-the-counter medication, hov flying with a cold and could foster a dangerous fals medication, any flight doc will tell you, "Don't!"

So, to admittedly stir the pot a little, here are t comment from the Safety Center Surgeon. Yes, we e-mail on this subject.

by Lt. Robb Webb

It was one of those rare good deals. Because the weather back in Texas was the typical winter trash, the squadron sent a bunch of us students to NAF El Centro to generate some ACM "X's." Raging around the CAVU desert in TA-4Js, mere sorties away from wings — it just doesn't get any better.

At the end of two weeks, our confidence was sky high, and we were looking ahead to upcoming carrier qualifications. Unfortunately, the combination of the desert dust and an oncoming head cold concerned me. As I closed the canopy while taxiing for a 1 v 1 hop, I knew things were not right.

My sinuses protested the slight overpressure on deck, but I could clear my ears, so I pressed on. After all, I had my emergency bottle of Afrin in my flight suit, just like the doc recommended. After barely making it through a slow descent from the MOA, I decided to snivel out of the next day's flying and asked to catch the airlift home in two days.

I planned to spend the next day in the rack trying to get healthy, but things changed quickly. A rapidly moving cold front descended on Texas and had already dumped snow on Dallas. Ops wanted to beat the storm home and decided to launch the Skyhawks immediately. At the same time, they insisted that we not just ferry the jets but fly air-navs on the way home. This left me in a tight spot. I knew I was not feeling 100 percent, but the squadron made it clear they had to justify every flight hour. Since I could still clear my ears, I decided that I could probably hack it.

The single leg home was right on the edge of a TA-4J's max range, necessitating a high-profile ramping up as the plane got lighter. To make matters worse, the weather forced us to deviate from our planned route. Two hours into the flight, I knew we were looking at an idle descent from the high 30's. Cabin pressure was in the mid-20's as I started the penetration.

As the cabin pressure stabilized at 8,000 feet, I felt a blinding pain in my forehead. I immediately leveled off and had the IP take the jet. I inhaled half my Afrin bottle to try to make the pain stop. By now, I was nearly incapacitated with pain from my front sinuses. The IP quickly reminded me that we had to get down now for fuel.

Said It Best: nself be True

course, you can get sick at any time. In the rewman thought he could use Afrin to overcome a ver, is not likely to prevent the complications of sense of security. As with all episodes of self-

more articles, supplemented by a definitive ll accept calm phone calls, short faxes and

Robert Trotter
color - Laurinda Minke

By the time we leveled at 2,000 feet, the pain had subsided a little, and I could land the jet myself. Walking back to the hangar, I noticed blood in my mucous, and I knew I had done some serious damage.

The flight surgeon confirmed what I suspected and promptly grounded me. After two months of antibiotics, sinus operations, pressure chamber rides and watching all my classmates get winged, I was finally back in the cockpit, much wiser about my personal limits and instincts. You have to learn when to put your own concerns ahead of squadron plans. As Shakespeare said: To thine ownself be true. Later, when I was a sergrad in the same squadron, several students learned the hard way, as I had, by injuring sinuses and eardrums.

A bottle of Afrin won't save you when you know you shouldn't be flying.

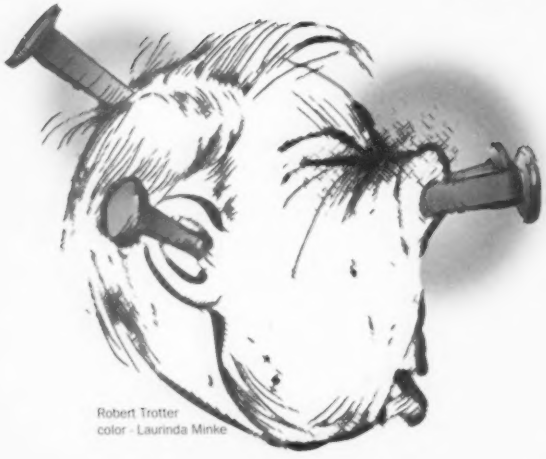
Lt. Webb flies with VFA-86.

A sinus block can be painful, disabling, and may result in a prolonged recovery. But the dangers of flying with a cold may go far beyond the complications of a sinus block. When you have a cold, the associated inflammation and swelling of the mucous membranes throughout the respiratory tract could include problems with the inner ear and the vestibular apparatus that is responsible for balance and sense of position in space. If a cold causes problems with your inner ear and vestibular system, vertigo and spatial disorientation could develop. These medical complications would be far more disabling than a sinus block.

The aviator in this story decided he could fly with a head cold and hack it, partly because he had his "emergency" bottle of Afrin tucked in his flight suit, "just like the doc recommended." The flight surgeon in the story didn't do anyone a favor and was partly responsible for the false sense of security that could have led to a disaster.

Afrin did not prevent the complications of flying with a cold, and it is unlikely that it will. Afrin is not an authorized medication for aviators in a flight status. If an aviator's condition warrants the prescription of Afrin, the flight surgeon should consider temporary grounding. A bottle of Afrin should never let you feel you can fly when you shouldn't.— Capt. James Fraser, MC, Naval Safety Center Surgeon.

The Return of t



Robert Trotter
color - Laurinda Minke

by Lt. Chris Bergen

WHEN I FIRST STARTED FLYING in VT-10, I read an *Approach* article about the "hot ice picks" that were described by veteran fliers who suffered the dreaded sinus block or sinus blowout. Of course, that wouldn't happen to me. I had always been careful to recognize when I wasn't medically fit to fly. If I developed any sort of congestion, I would see the flight doc, get some medication if needed, rest up and ride out the cold. Somewhere between VT-10 and the fleet, my decision process broke down in a big way.

The boat headed out for a six-week adventure that promised lots of flying. I wasn't slated to fly aboard, because I was recovering from a bad head cold. I was feeling better a day or two before cyclic operations were to start, so I figured I would see the doc on the first fly day for an up-chit. I was itching to get back into the jet.

After being med down with a cold for more than a week and preparing for the detachment, it had been almost two weeks since my last flight, and I didn't want to lose any more traps.

The doc did the usual poking, prodding and asked, "Can you valsalva?" Then he gave me the up chit.

"If I can valsalva, and the doc says I'm good to go, who am I to question a medical expert?" I figured

Our crew briefed, pre-flighted and manned up. It was a little chilly on the flight deck, and my nose was running.

"Just the cold air," I told myself.

We climbed to FL 180 and proceeded with the mission. Approximately 30 minutes before we had to return overhead the ship, ECMO 3 noticed a ship to our left. Not wanting to waste a training opportunity, we decided to descend and investigate.

On the descent, the pilot pulled the power back to idle while we were at about 15,000 feet. For some reason, the cockpit depressurized, going from the normal 8,000 feet to 15,000 feet (our present altitude). With a slight application of power, the cockpit re-pressurized to the normal 8,000 feet. However, my sinuses decided enough was enough. In the time it took to repressurize the cockpit (it felt like forever) my head felt like a balloon was inflating behind my eyes. Next, I was treated to the uncomfortable feeling of needles pushing on

Next, I was treated

of needles pushing on my

ne Hot Ice Picks

my sinuses from the inside out. I immediately called over the ICS to level off, but the problem was the re-pressurizing cockpit, not our descent. After the cockpit re-pressurized to 8,000 feet, no amount of rubbing my eyes and nose or squirting Afrin (which I kept in my SV-2) seemed to relieve the dull pain and throbbing inside my head.

The return overhead was normal. The pilot began a shallow descent through 8,000 feet to our holding altitude of 4,000 feet. The rest of the flight was uneventful. The mission commander (also the ops officer) noted that I probably shouldn't fly that night since I had taken Afrin. The pain in my head told me that it might be a little longer than he thought.

The flight surgeon was a little surprised to see me again, and after explaining the situation, he ordered X-rays taken. I'm not a doctor and the X-ray technician wasn't either, but it didn't take a rocket scientist to see the clots of blood that littered my sinus cavities. The real shock came when the flight surgeon told me to come back in two weeks for more X-rays. I was med down again.

Two weeks dragged by as I stood duty after duty, watching my squadronmates bag traps. More X-rays showed the clots clearing. "Come back next week, and we'll see how they look then," said the flight surgeon. Nearly a month later, my sinuses had cleared, and I could fly again. Believe it or not, I was lucky. I had suffered a sinus block, not a sinus tear or what is more commonly known as a blowout. My sinus-cavity lining filled with blood like a balloon, but didn't burst. A blowout means a six-month down chit. I was lucky because our crew could stop our descent without any trouble. If we had just begun any sort of nose-low maneuver, or had been at a higher altitude when we lost pressurization and then re-pressurized, the results could have been much worse.

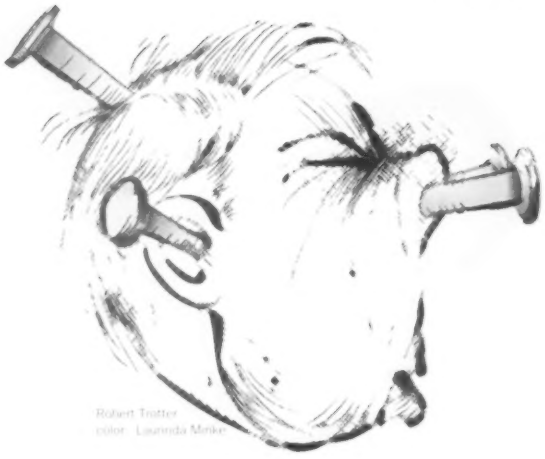
Was I really OK to fly that day? No, I should have waited until I knew myself that I was good to go. No amount of medical training gives a doctor the ability to know how you are feeling. He has to rely on what you tell him. Just because you can valsalva doesn't mean your sinuses are clear. Your ears may be, but not your sinuses. If your nose is running, it's congestion, not a weather indicator.

Lt. Bergen flies with VAQ-132.

to the uncomfortable feeling

inuses from the inside out.

The Return of t



Robert Trotter
color: Laurinda Mink

by Lt. Chris Bergen

WHEN I FIRST STARTED FLYING in VT-10, I read an *Approach* article about the "hot ice picks" that were described by veteran fliers who suffered the dreaded sinus block or sinus blowout. Of course, that wouldn't happen to me. I had always been careful to recognize when I wasn't medically fit to fly. If I developed any sort of congestion, I would see the flight doc, get some medication if needed, rest up and ride out the cold. Somewhere between VT-10 and the fleet, my decision process broke down in a big way.

The boat headed out for a six-week adventure that promised lots of flying. I wasn't slated to fly aboard, because I was recovering from a bad head cold. I was feeling better a day or two before cyclic operations were to start, so I figured I would see the doc on the first fly day for an up-chit. I was itching to get back into the jet.

After being med down with a cold for more than a week and preparing for the detachment, it had been almost two weeks since my last flight, and I didn't want to lose any more traps.

The doc did the usual poking, prodding and asked, "Can you valsalva?" Then he gave me the up chit.

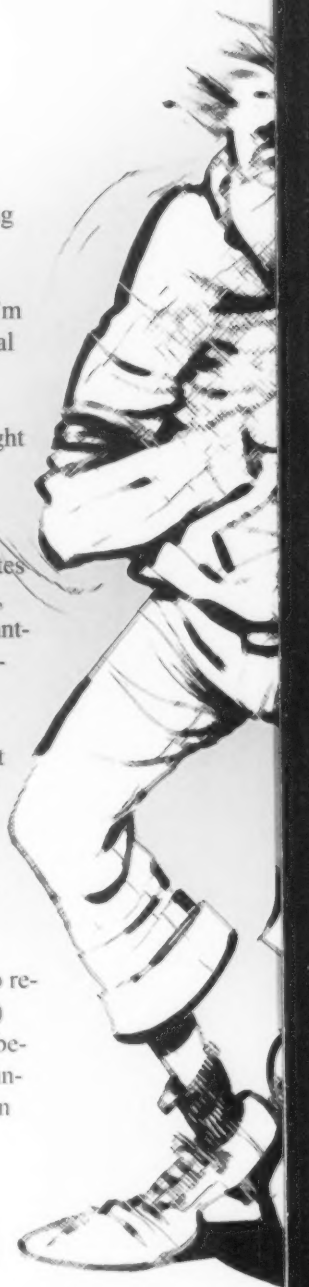
"If I can valsalva, and the doc says I'm good to go, who am I to question a medical expert?" I figured

Our crew briefed, pre-flighted and manned up. It was a little chilly on the flight deck, and my nose was running.

"Just the cold air," I told myself.

We climbed to FL 180 and proceeded with the mission. Approximately 30 minutes before we had to return overhead the ship, ECMO 3 noticed a ship to our left. Not wanting to waste a training opportunity, we decided to descend and investigate.

On the descent, the pilot pulled the power back to idle while we were at about 15,000 feet. For some reason, the cockpit depressurized, going from the normal 8,000 feet to 15,000 feet (our present altitude). With a slight application of power, the cockpit re-pressurized to the normal 8,000 feet. However, my sinuses decided enough was enough. In the time it took to repressurize the cockpit (it felt like forever) my head felt like a balloon was inflating behind my eyes. Next, I was treated to the uncomfortable feeling of needles pushing on



Next, I was treated

of needles pushing on my

ne Hot Ice Picks

my sinuses from the inside out. I immediately called over the ICS to level off, but the problem was the re-pressurizing cockpit, not our descent. After the cockpit re-pressurized to 8,000 feet, no amount of rubbing my eyes and nose or squirting Afrin (which I kept in my SV-2) seemed to relieve the dull pain and throbbing inside my head.

The return overhead was normal. The pilot began a shallow descent through 8,000 feet to our holding altitude of 4,000 feet. The rest of the flight was uneventful. The mission commander (also the ops officer) noted that I probably shouldn't fly that night since I had taken Afrin. The pain in my head told me that it might be a little longer than he thought.

The flight surgeon was a little surprised to see me again, and after explaining the situation, he ordered X-rays taken. I'm not a doctor and the X-ray technician wasn't either, but it didn't take a rocket scientist to see the clots of blood that littered my sinus cavities. The real shock came when the flight surgeon told me to come back in two weeks for more X-rays. I was med down again.

Two weeks dragged by as I stood duty after duty, watching my squadronmates bag traps. More X-rays showed the clots clearing. "Come back next week, and we'll see how they look then," said the flight surgeon. Nearly a month later, my sinuses had cleared, and I could fly again. Believe it or not, I was lucky. I had suffered a sinus block, not a sinus tear or what is more commonly known as a blowout. My sinus-cavity lining filled with blood like a balloon, but didn't burst. A blowout means a six-month down chit. I was lucky because our crew could stop our descent without any trouble. If we had just begun any sort of nose-low maneuver, or had been at a higher altitude when we lost pressurization and then re-pressurized, the results could have been much worse.

Was I really OK to fly that day? No, I should have waited until I knew myself that I was good to go. No amount of medical training gives a doctor the ability to know how you are feeling. He has to rely on what you tell him. Just because you can valsalva doesn't mean your sinuses are clear. Your ears may be, but not your sinuses. If your nose is running, it's congestion, not a weather indicator.

Lt. Bergen flies with VAQ-132.

to the uncomfortable feeling

inuses from the inside out.

Soft Cat

by Lt. Michael R. Alexander

I WAS A NUGGET PILOT, and my E-2 squadron had just finished two weeks of FCLPs. Next came carrier quals followed by a six-month deployment to the Persian Gulf. It was a normal fleet CQ: get your day touch-and-goes mixed in with two traps and return that night to complete day-night currency. The day period went fine.

The squadron returned overhead the ship that night and got the usual marshal instructions. After a solid night CQ for the XO (my pilot) and me, we were ready to head back to the beach. I got my last night pass, and we taxied back to elevator 4 to top off the Hawkeye with gas before our last cat shot.

After the tanks were full, starboard engine restarted, and pre-taxi checks completed, the yellow shirt directed me to cat 1. On the way to the cat, we completed the pre-takeoff and takeoff checks. The weight-board operator showed us 6,000 pounds lighter than we were. We called the Boss to tell him the ridiculously low number. The greenshirt readjusted the weight setting. We got one more look at the board, and it was right on the money; the XO rogered it.

We taxied into the shuttle and waited for a green deck. I double-checked all instruments and circuit breakers. When I finished my checks, I looked out beyond the deck-edge lights into the moonless black hole. As I looked into the darkness, the green ready-deck light lit. It was time to go.

The shooter gave the signal to run up the engines, I ran the power levers to max power and checked configuration and all the instruments. All looked good. The XO confirmed with a thumbs-up, and the external lights came to life. The shooter touched the deck, signalling the deck-edge operator to hit the button. Off we went down the catapult.

We quickly realized we were dealing with a soft cat shot. The question was whether it would put us in the water.

When we cleared the deck, I raised the gear and we started descending. Already at max power, I could only reduce the rate of descent by raising the nose. As AOA increased to 1 unit below rudder shakers, the minimum rate of descent I could sustain was 200 to 300 fpm. Things were looking grim.

Shot

The question was whether it would put us in the water.

With cat-like reflexes, the XO lowered the flaps from 10 to 30 degrees. The increased lift from the wing gave us an extra airspeed margin, allowing us to safely climb from a hair-raising altitude of 30 feet. The rest of the hop was uneventful as we turned east for the beach.

Returning to the ship the following night, we met with the shooter, who explained to us that because he was tired, he mistakenly thought that the adjusted weight on the board

PH3 Kris White

was incorrect, and that we were, in fact, 6,000 pounds lighter than we actually were. The cat was then set for that weight, resulting in a dangerously slow end-speed.

Everything happened in a matter of seconds. Many of the time-critical emergencies in naval aviation must be dealt with immediately to save aircraft and crew.

What does this tell us about aviators? We must think of possible emergency situations and how to deal with them before they occur. Briefing the crew and making them aware of what to do in case of an immediate-action emergency is imperative. In this case, we had briefed cold cat shot and soft cat shot procedures and thought them out before jumping into the cockpit. Taking these extra few seconds saved our lives.

Lt. Alexander flew with VAW-116. He is now with VT-19.

The CNAL and CNAP Launch and Recovery Operations Manual 13800 clearly defines the procedures and safeguards for launching aircraft. Having been a shooter, I can say the events related here, though not completely unbelievable, should never have happened. The aircrew passed their weight to Primary. Typically, either the Boss or Mini then relays that information via the mouse (or flight-deck Hydra system) to the deck.

Although the shooter had the opportunity to hear the transmission, it appears he didn't. There's no caveat in the procedures that allows the shooter to digress from a rogered weightboard. Futhermore, the launch sequence should have stopped because of another built-in safety feature. The central-charging panel operator, who usually gets the aircraft weight from the JBD operator, performs an independent, simultaneous verification of the catapult's capacity selector valve, and he should have noticed the discrepancy. — LCdr. Mark Enderson, Head, Media and Educaton Support Branch, Naval Safety Center.

Letters to the Editor

Re: Lessons Learned (December '97)

NAS Norfolk — I have to take issue with this article. The author says, "The pilot had a preconceived notion that a fire-warning light was a dangerous threat that warranted immediate action. This mindset contributed to a hasty decision-making process that ultimately led to human error."

I thought we learned the lesson — at least in the E-2 and C-2 community where false fire-warning lights are the norm — that failure to do emergency procedures in a timely fashion can render these procedures useless in a real fire.

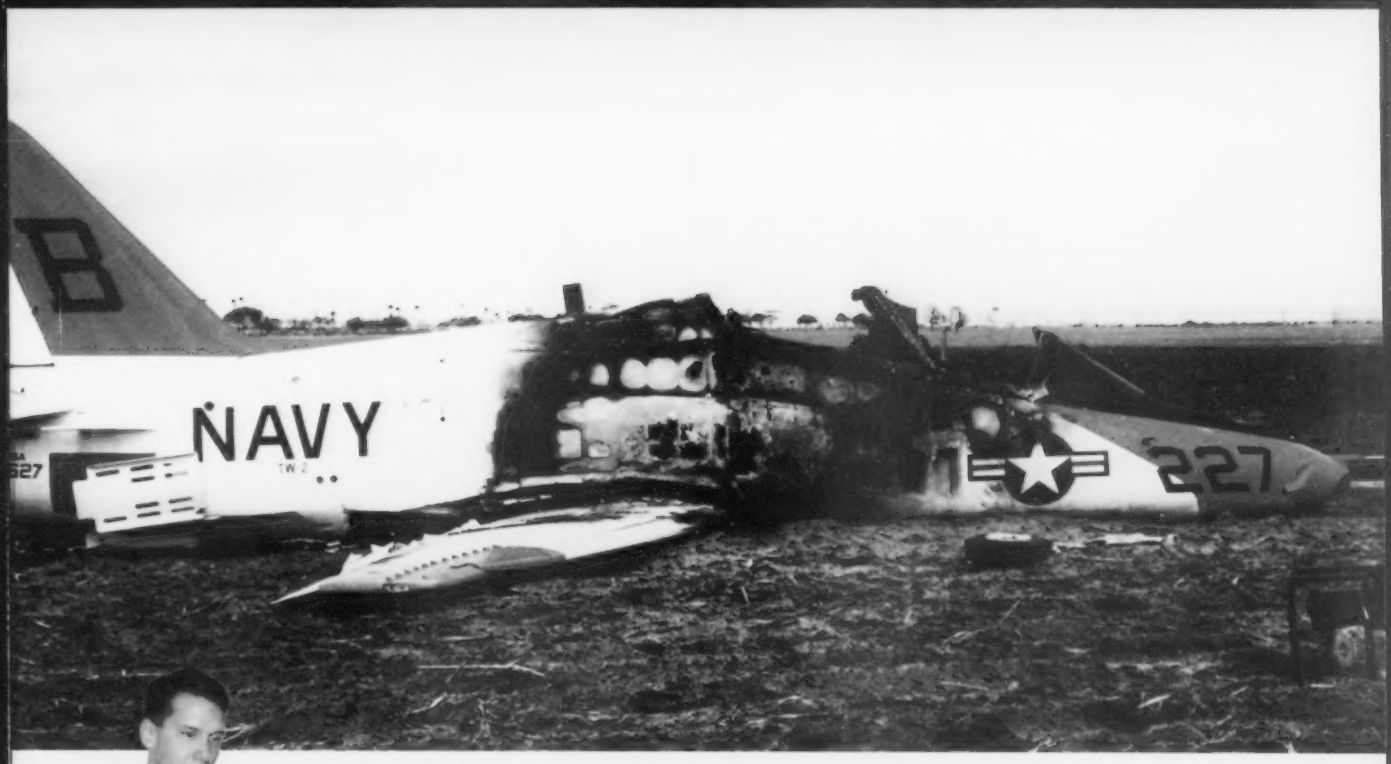
Also, the article does not say whether the pilot failed to properly do NATOPS procedures; it only implies that he failed. I don't doubt he screwed up, but waiting for a wingman to join up and perhaps not see a fire until it has burned through the skin doesn't sound like good advice.

Cdr. Mark Boettcher
CO, VRC-40

The article's message was for aircrew to prudently do the boldface NATOPS and avoid hasty reactions that may lead to human error, as happened here. The story in no way implies that aircrew take no action at all, which is against NATOPS.

From an ACT standpoint, a wingman is not much different from another aircrew member. Nine times out of 10, a wingman can do something to help in an emergency, even something as simple as taking over flight communications. In this case, the wingman did absolutely nothing. In any emergency, it is prudent to use all available assets, especially other aviators (including wingmen) as the AMB determined in this mishap.

I encourage my wingmen to get involved and use good headwork to help me. — LCdr. L.H. Tawney, FA-18 analyst, Naval Safety Center.



The Truth About Single-Seat Airliners

by Col. J.L. Whitlow

EXPERIENCED FLIGHT INSTRUCTORS know what mistakes students are going to make before they walk to the aircraft. As an instructor in VMAT(AW)-202, the Marine Corps' A-6 FRS, I remember countless briefings and debriefings during which I related my experience to students, hoping they wouldn't make the mistakes I knew they would make. However, I soon realized that no matter how hard I tried, a certain percentage were still going to make those mistakes, and I needed to be prepared when they did.

Because the student pilot in an Intruder had the only set of controls, I was along for the ride, but consciously and subconsciously, I created a margin for error. Some of that margin for error was built into the syllabus, some of it was prebriefed (based on the circumstances at the time, such as weather and aircraft limitations), and some

was incorrect, and that we were, in fact, 6,000 pounds lighter than we actually were. The cat was then set for that weight, resulting in a dangerously slow end-speed.

Everything happened in a matter of seconds. Many of the time-critical emergencies in naval aviation must be dealt with immediately to save aircraft and crew.

What does this tell us about aviators? We must think of possible emergency situations and how to deal with them before they occur. Briefing the crew and making them aware of what to do in case of an immediate-action emergency is imperative. In this case, we had briefed cold cat shot and soft cat shot procedures and thought them out before jumping into the cockpit. Taking these extra few seconds saved our lives.

Lt. Alexander flew with VAW-116. He is now with VT-19.

The CNAL and CNAP Launch and Recovery Operations Manual 13800 clearly defines the procedures and safeguards for launching aircraft. Having been a shooter, I can say the events related here, though not completely unbelievable, should never have happened. The aircrew passed their weight to Primary. Typically, either the Boss or Mini then relays that information via the mouse (or flight-deck Hydra system) to the deck.

Although the shooter had the opportunity to hear the transmission, it appears he didn't. There's no caveat in the procedures that allows the shooter to digress from a rogered weightboard. Futhermore, the launch sequence should have stopped because of another built-in safety feature. The central-charging panel operator, who usually gets the aircraft weight from the JBD operator, performs an independent, simultaneous verification of the catapult's capacity selector valve, and he should have noticed the discrepancy. — LCdr. Mark Enderson, Head, Media and Educaton Support Branch, Naval Safety Center.

Letters to the Editor

Re: Lessons Learned (December '97)

NAS Norfolk — I have to take issue with this article. The author says, "The pilot had a preconceived notion that a fire-warning light was a dangerous threat that warranted immediate action. This mindset contributed to a hasty decision-making process that ultimately led to human error."

I thought we learned the lesson — at least in the E-2 and C-2 community where false fire-warning lights are the norm — that failure to do emergency procedures in a timely fashion can render these procedures useless in a real fire.

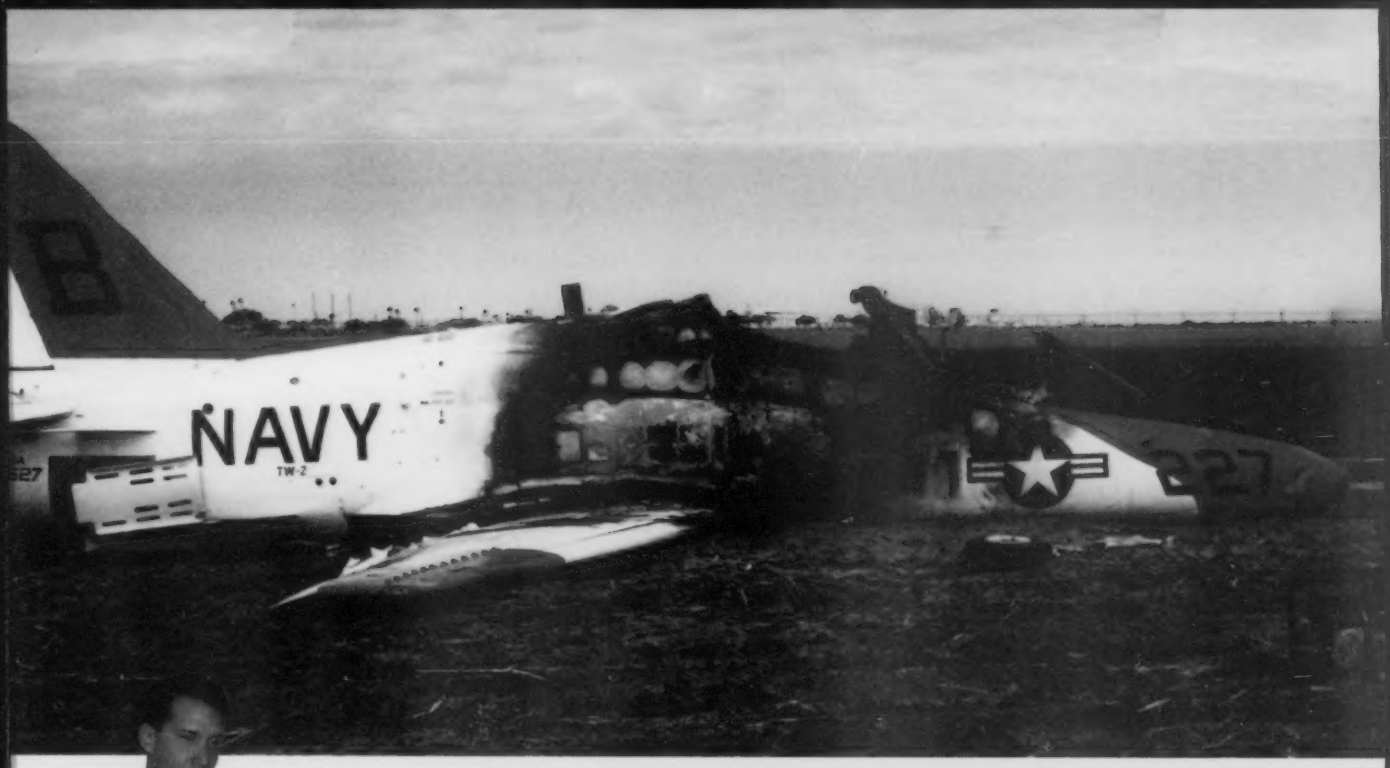
Also, the article does not say whether the pilot failed to properly do NATOPS procedures; it only implies that he failed. I don't doubt he screwed up, but waiting for a wingman to join up and perhaps not see a fire until it has burned through the skin doesn't sound like good advice.

Cdr. Mark Boettcher
CO, VRC-40

The article's message was for aircrew to prudently do the boldface NATOPS and avoid hasty reactions that may lead to human error, as happened here. The story in no way implies that aircrew take no action at all, which is against NATOPS.

From an ACT standpoint, a wingman is not much different from another aircrew member. Nine times out of 10, a wingman can do something to help in an emergency, even something as simple as taking over flight communications. In this case, the wingman did absolutely nothing. In any emergency, it is prudent to use all available assets, especially other aviators (including wingmen) as the AMB determined in this mishap.

I encourage my wingmen to get involved and use good headwork to help me. — LCdr. L.H. Tawney, FA-18 analyst, Naval Safety Center.



The Truth About Single-Seat Airliners

by Col. J.L. Whitlow

EXPERIENCED FLIGHT INSTRUCTORS know what mistakes students are going to make before they walk to the aircraft. As an instructor in VMAT(AW)-202, the Marine Corps' A-6 FRS, I remember countless briefings and debriefings during which I related my experience to students, hoping they wouldn't make the mistakes I knew they would make. However, I soon realized that no matter how hard I tried, a certain percentage were still going to make those mistakes, and I needed to be prepared when they did.

Because the student pilot in an Intruder had the only set of controls, I was along for the ride, but consciously and subconsciously, I created a margin for error. Some of that margin for error was built into the syllabus, some of it was prebriefed (based on the circumstances at the time, such as weather and aircraft limitations), and some

of it I made up as we went along, based on the student's performance.

Analysis of pilot error in mishaps points us down a similar path. We know what errors our aircrews make, and we should keep trying to prevent them. However, given the fact that most of us will still make errors, the question is, can we plan for them better? Can we build in a margin for error that will make the event less tragic?

Part of the answer lies in getting better information from the Safety Center on pilot error: frequency, flight regime, and effect. Armed with those analyses, we could perhaps answer the questions of what could have prevented the mishap — not prevented the error, but prevented the mishap.

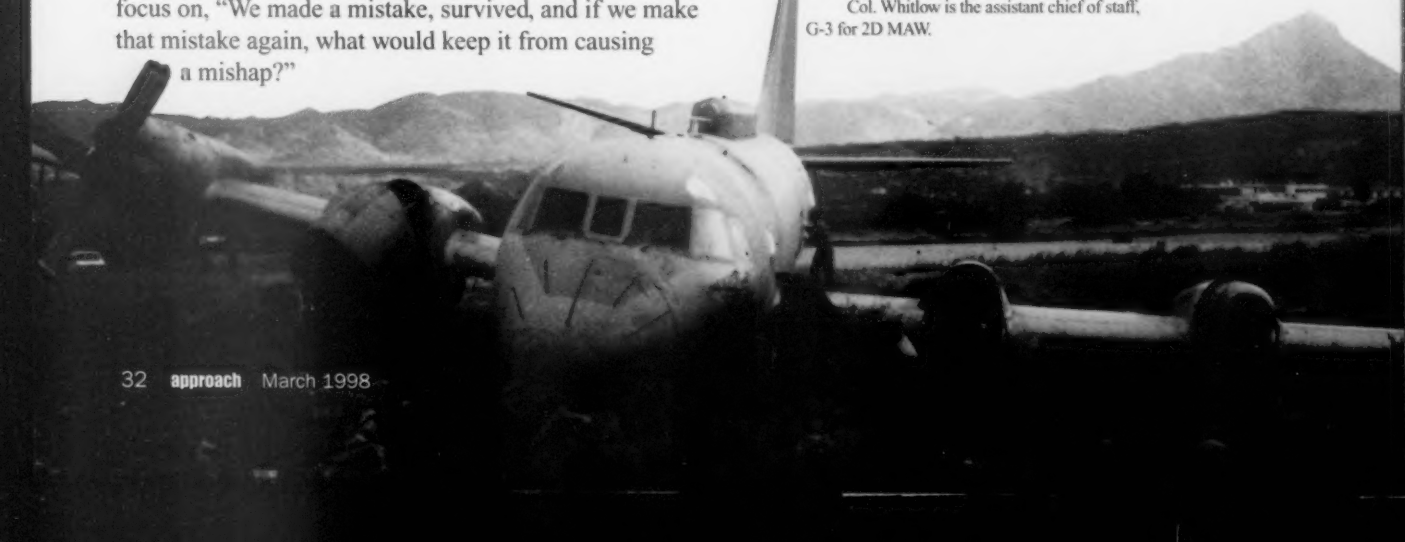
Are we even collecting all the data on errors? My guess is that we only have data on pilot errors that are identified by our mishap boards. Can we develop a system that would give us that type of feedback from aircrew on a routine basis without attributing the sources? Can we learn something a little different from close calls? Instead of saying, "I made a mistake, survived, and I'll never let that happen again," perhaps we could focus on, "We made a mistake, survived, and if we make that mistake again, what would keep it from causing a mishap?"

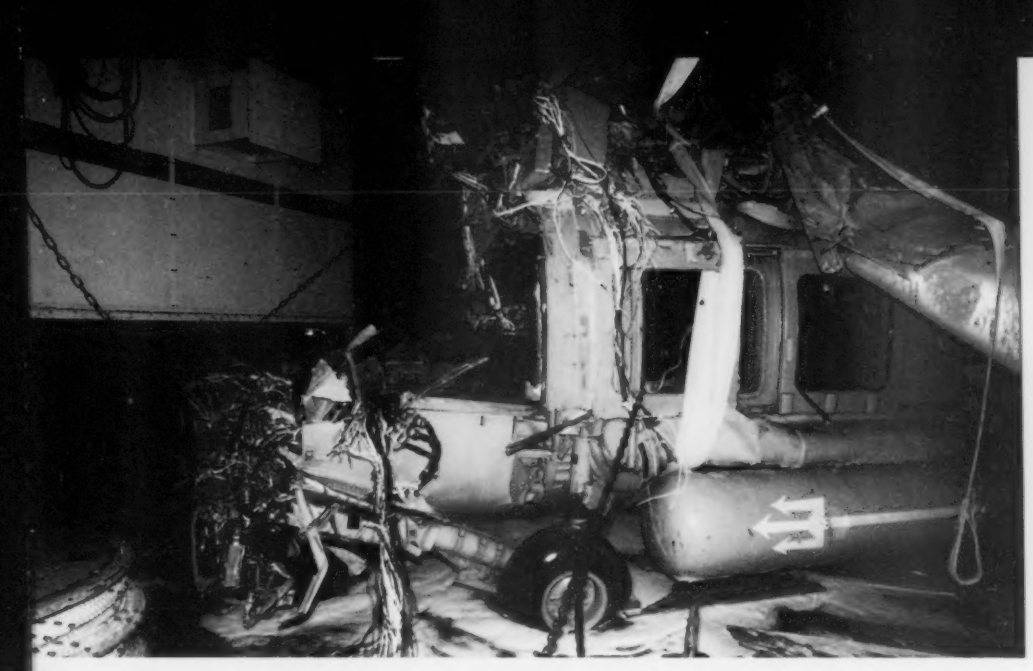
We should always brief common errors and margin for error. Complement the training and readiness syllabi with squadron and group SOPs that plan for errors. Commanders must continue to ensure they are creating a ready-room environment that will allow them to keep a finger on the pulse of their operations and allow aircrew to share experiences.

Along with a more thorough analysis of error, can electronic and mechanical systems reduce the effect of an aircrew error? (For example, what about the simple issue of single-seat aircraft versus multi-place aircraft? I think we know why there aren't any single-seat airliners.)

My old squadron XO and I used to sit in Ready 7 in the JFK and philosophize about how young, eager pilots get to be old, seasoned vets. We came up with a lot of reasons. Not all of them were fit to print. But some of us just understand our limitations a little better, and innately give ourselves that little extra margin for error. If that's true, perhaps we can adopt that philosophy as an institution and shift our focus from trying to prevent errors to trying to plan for them. We need to better understand our collective limitations.

Col. Whitlow is the assistant chief of staff, G-3 for 2D MAW.





Col. Whitlow addresses crucial thought processes that need to go into the operational management of aviation programs and the identification of hazards associated with every flight. Lessons learned from previous mishaps are a great starting point. To reinforce Col. Whitlow's discussion on the responsibilities of aircraft commanders and instructor pilots, as applied to planning ahead, let me provide a current example where we relearned old lessons.

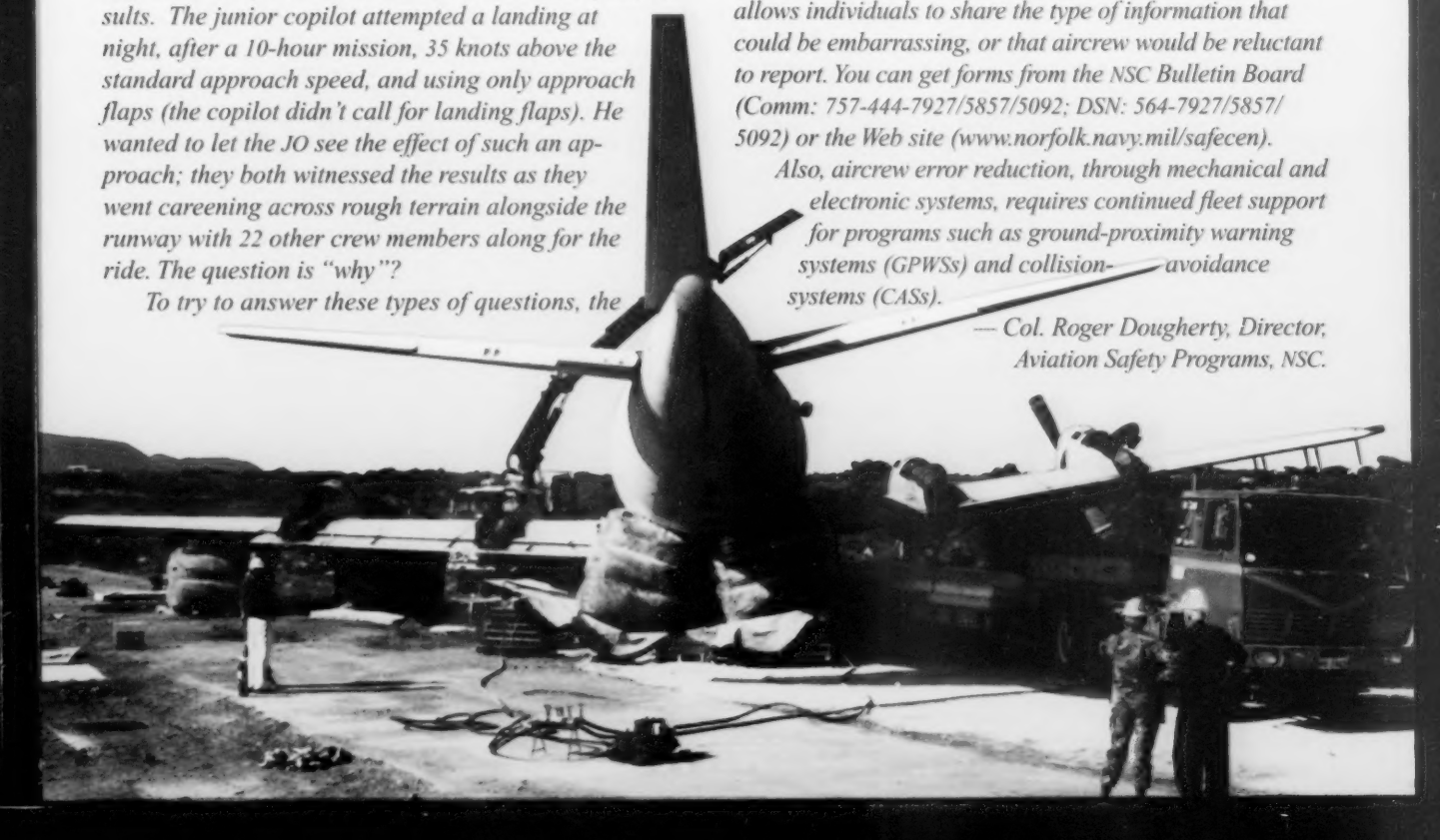
In a recent mishap, the aircraft commander, instructing a nugget, allowed the copilot to proceed with a bad approach that put them into a box with catastrophic results. The junior copilot attempted a landing at night, after a 10-hour mission, 35 knots above the standard approach speed, and using only approach flaps (the copilot didn't call for landing flaps). He wanted to let the JO see the effect of such an approach; they both witnessed the results as they went careening across rough terrain alongside the runway with 22 other crew members along for the ride. The question is "why"?

To try to answer these types of questions, the Naval Safety Center (NSC) has initiated a detailed analysis of 185 Class A mishaps that occurred between FY90 and FY96 with emphasis on human factors. The Marine Corps helicopter aviation portion is complete and distributed. The Marine Corps TACAIR and Navy helicopter analyses are complete and are being printed. The study on Navy TACAIR will be completed by April 1998. These studies provide the human factor causes and summaries of the associated mishaps to help you in your risk-management program.

The NSC also recently instituted the Naval Aviation Anonymous Safety Reporting Program (NAASREP), which allows individuals to share the type of information that could be embarrassing, or that aircrew would be reluctant to report. You can get forms from the NSC Bulletin Board (Comm: 757-444-7927/5857/5092; DSN: 564-7927/5857/5092) or the Web site (www.norfolk.navy.mil/safecen).

Also, aircrew error reduction, through mechanical and electronic systems, requires continued fleet support for programs such as ground-proximity warning systems (GPWSs) and collision-avoidance systems (CASs).

— Col. Roger Dougherty, Director, Aviation Safety Programs, NSC.

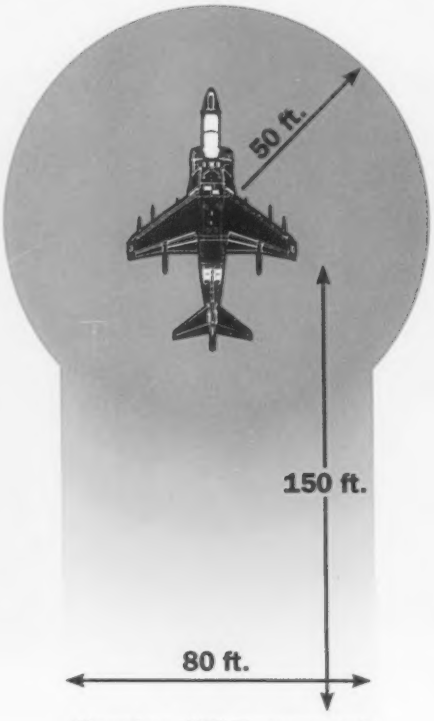


This One's Different!

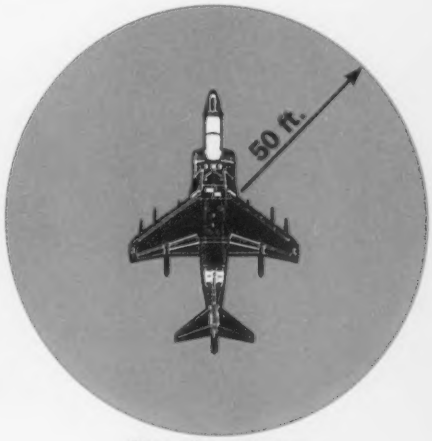
air intake and jet efflux DANGER ZONES

40 ft.
Safe Area when ground idling only with nozzles aft. May be occupied with caution for starting and adjustments.
150 ft.
80 ft.

Nozzles Aft to 45° Down

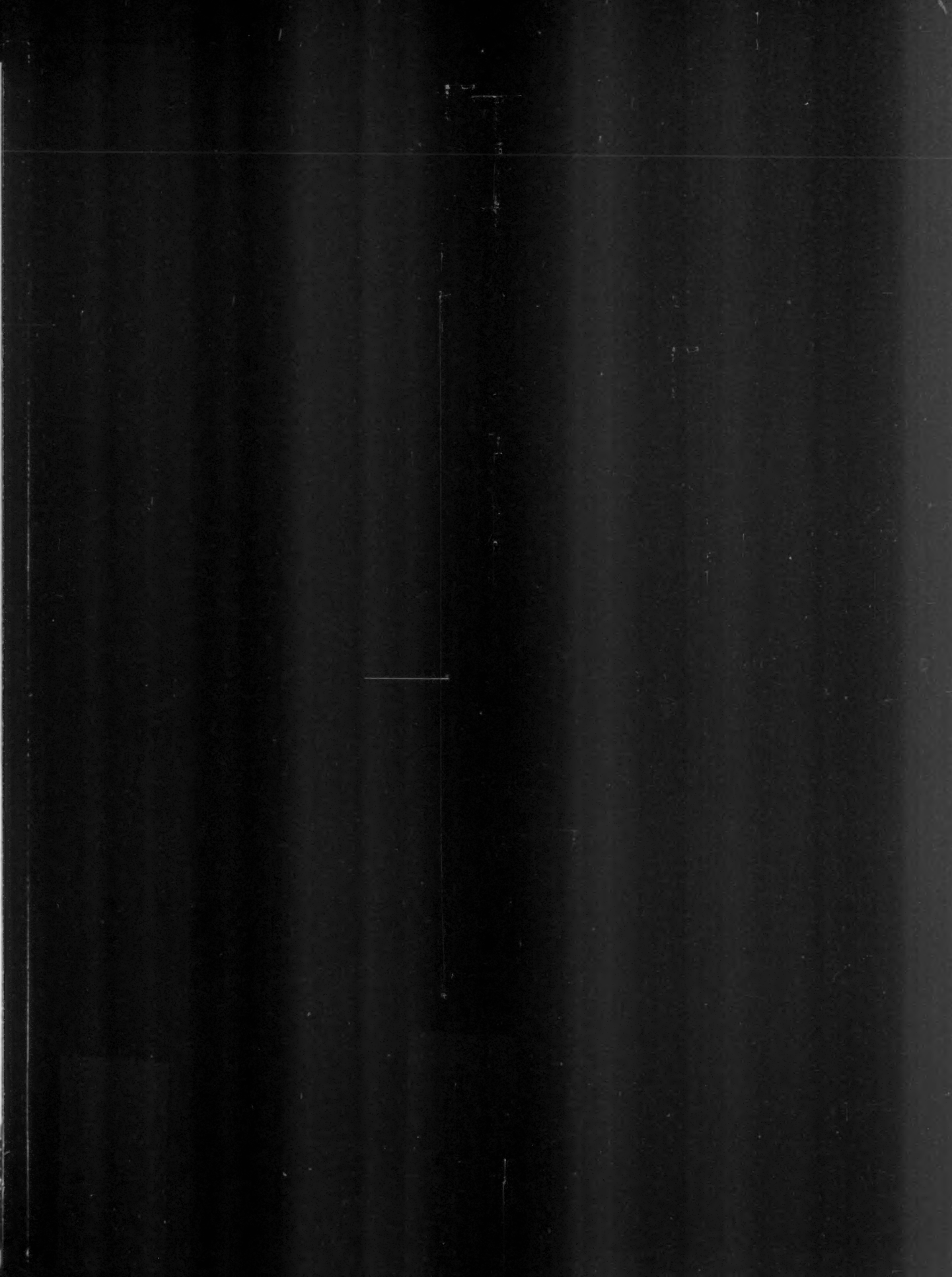


Nozzles 45° Downward



Nozzles Down

People should avoid being out of the pilot's view during vertical takeoff, vertical landing or hovering unless they are by a fixed obstruction known to the pilot.

Photo by PHAN Brian Fleske

Visit our homepage at: www.norfolk.navy.mil/safecen